REPORT RESUMES

ED 017 341 PS 000 497
THE NEW ELEMENTARY SCHOOL.
BY- FRAZIER, ALEXANDER, ED.
ASSOCIATION FOR SUPERVISION AND CURRICULUM DEV.
NATIONAL EDUCATION ASSN., WASHINGTON, D.C.
PUB DATE 68
EDRS PRICE MF-$0.75 HC NOT AVAILABLE FROM EDRS. 157P.

DESCRIPTORS- *ELEMENTARY SCHOOLS, *EDUCATIONAL TRENDS, STUDENT TEACHER RATIO, *SCHOOL ORGANIZATION, *CURRICULUM DESIGN, *TEACHER CHARACTERISTICS, COMPREHENSION, FAMILY INFLUENCE, CONCEPT FORMATION, CULTURAL DISADVANTAGEMENT, PSYCHOLINGUISTICS, LANGUAGE DEVELOPMENT, LANGUAGE USAGE, UNGRADED SCHOOLS, MIDDLE SCHOOLS, INSERVICE EDUCATION, ELEMENTARY SCHOOL TEACHERS, TEACHER ROLE, TEACHING MODELS, SOCIAL STUDIES, CORE CURRICULUM, CURRICULUM DEVELOPMENT,

THE 8 PAPERS OF THIS BOOKLET DEAL WITH VARIOUS ASPECTS OF THE NEW ELEMENTARY SCHOOLS. THE INTRODUCTION SINGLES OUT, AS MAJOR AREAS OF CONCERN, (1) THE NEW STRESS ON THE EDUCATION OF YOUNGER CHILDREN, (2) NEW EVALUATIONS OF ADULT-CHILD RATIOS FOR SCHOOLS, (3) NEW ORGANIZATIONAL PATTERNS FOR SCHOOLS, (4) CHANGES IN TEACHER FUNCTIONS, AND (5) CURRICULUM REDEVELOPMENT. THE FIRST 3 PAPERS DEAL WITH NEW KNOWLEDGE ABOUT CHILDREN, THE FIRST WITH THE PSYCHOLOGY OF UNDERSTANDING, THE SECOND WITH THE EFFECTS OF HOME AND FAMILY ON CONCEPTUAL DEVELOPMENT, AND THE THIRD WITH THE ACQUISITION OF LANGUAGE. THE SECOND GROUP OF 3 PAPERS IS CONCERNED WITH NEW APPROACHES TO ORGANIZATION AND STAFFING. THE FIRST DISCUSSES NEW ORGANIZATIONAL PATTERNS, WITH PARTICULAR ATTENTION TO THE "MIDDLE SCHOOL" PROPOSAL. THE SECOND SURVEYS THE STATUS OF IN-SERVICE EDUCATION FOR ELEMENTARY TEACHERS. THE THIRD SUGGESTS NEW MODELS FOR THE ELEMENTARY TEACHER AND CONSIDERS THE KNOWLEDGE NECESSARY FOR EACH. THE LAST 2 PAPERS COVER CURRICULUM CONTENT AND CURRICULUM DESIGN. THE FIRST REVIEWS AN EXAMPLE OF SOCIAL STUDIES IN THE ELEMENTARY SCHOOL, AND THE SECOND DISCUSSES THE BASIC ASSUMPTIONS AND CONTENT PRIORITIES OF THE NEW CURRICULUM DESIGNS. THIS DOCUMENT IS AVAILABLE FROM ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, NATIONAL EDUCATION ASSOCIATION, 1201 SIXTEENTH STREET, N.W., WASHINGTON, D.C 20036 FOR $2.50. (DR)

ED017341

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The New Elementary School

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The New Elementary School

EDITED BY
ALEXANDER FRAZIER

Papers from the Roundtable on New Knowledge about Children Sponsored by the Elementary Education Advisory Council of the Association for Supervision and Curriculum Development (1966) and from the Conference on the New Elementary School Sponsored by the Council in Cooperation with the Department of Elementary School Principals (1967)

Association for Supervision and Curriculum Development, NEA
Department of Elementary School Principals, NEA
1201 Sixteenth Street, N.W., Washington, D.C. 20036

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Library of Congress Catalog Card Number: 67-29531

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Foreword

ONE thick volume probably would be too thin to cover adequately the host of concerns related to *The New Elementary School.* Division or chapter headings would surely include consideration of objectives, selection of content, organization for instruction, sequence, methods, materials, the student population, teacher education, and administration. In addition there would need to be separate treatments of new developments in elementary school science, social studies, mathematics, and other curriculum areas. This list of concerns would almost provide a categorization of ASCD publications. Surely the series on current curriculum developments does an excellent job of describing and appraising innovations in the subject areas of the elementary school.

Seeing little value in a superficial treatment of all aspects of *The New Elementary School,* this booklet concentrated upon only a few concerns in elementary education where really new ideas are being developed and where there is new research to be reported. Especial consideration is given here to new knowledge about young children and how they grow and develop, patterns of content selection and organization, and to new patterns of teacher education. If the expertness of the authors in these areas were not already recognized, it would be readily apparent from their contributions here. ASCD is pleased to add this booklet to its publication list.

December 1967

J. Harlan Shores, *President*
Association for Supervision
and Curriculum Development

Acknowledgments

THE Association wishes to express its gratitude to Alexander Frazier, who served as editor for this publication. Final editing of the manuscript and production of this booklet were the responsibility of Robert R. Leeper, Associate Secretary and Editor, ASCD Publications. Technical production was handled by Claire J. Larson, Mary Ann Lurch, and Joan H. Steffenburg, assisted by Teola T. Jones.

Introduction

GROWING out of a desire of curriculum workers at different levels—elementary school principals, curriculum directors, supervisors, university professors, coordinators of elementary education, and teachers—to work together on issues of mutual concern, a conference emerged designed to bring together members of ASCD and DESP to consider common problems.

The five papers, "New Organizational Patterns for the Middle School Years"; "New Patterns of In-service Education of Elementary Teachers"; "The New Elementary School Teacher"; "Social Studies in the Elementary School: A Case Example of New Content"; and "New Curriculum Designs for Children," contained in this publication were presented at the conference, which focused upon "The New Elementary School." Four additional papers, developed through the work of the ASCD Elementary Education Advisory Council, are also included in this booklet.

The conference was sponsored by the Elementary Education Advisory Council of the Association for Supervision and Curriculum Development and the Department of Elementary School Principals, NEA, January 13-15, 1967, in St. Louis, Missouri.

Three hundred thirty educational leaders participated in this conference.

December 1967

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A Framework of Concerns: An Introduction

ALEXANDER FRAZIER

HOW should a reader approach these papers on the new elementary school? The options are several. Perhaps the reader may be looking for new information about what is going on to add to what he already knows. Or he may be seeking help in clarifying the current scene. Possibly he may be hoping to receive advice about what is most worth taking seriously. Whatever his immediate purpose, the reader may be supposed to approach this booklet with some general sense of the direction in which the elementary school is moving. All of us operate within a framework of major concerns about the changing shape of elementary education.

The editor has chosen to propose a framework of his own as a basis for introducing the reader to what follows. Familiarity with the papers and with the planning that produced them has, of course, guided the formulation of the concerns. Indeed, the framework might have been placed at the end of the booklet as a kind of summary of intent. But it is placed here instead in the hope that it will help to provide unity of impact in the reader's encounter with viewpoints that are varied and with a coverage that is necessarily limited by the scope of the undertaking.

What, then, are major areas of current concern in elementary education to which these papers may be expected to contribute insights and understandings?

Education of Younger Children

The President's message to Congress on children and youth of February 1967, highlights the remarkable growth of concern for the education of young children. In addition to calling for an expansion of summer Head Start programs to a full year and for an extension of such programs into the primary years, the President proposes expansion of schooling for three- and four-year-olds and for pilot ventures into earlier education.

The emphasis on younger children in federally supported programs is understood by most of us to arise from a broader base than concern for the better education of the disadvantaged, important as that is. One-third of the work force in the United States is made up of women; the proportion is certain to increase. Also the public demand for a higher quality of education that focused first on the secondary school has shifted inevitably and even mercilessly downward to encompass the furthest reaches of the school.

Moreover, curriculum makers for young children are necessarily concerned with all children, even though their immediate focus may be on a portion of the pupil population such as the disadvantaged. The new research base for the education of younger children, as the reports by John, Henle, and Shipman and Hess in this booklet indicate, contains insights on concept and language development that have the widest possible significance for teaching and curriculum.

While it may seem too early to say what the new concern for the education of younger children will ultimately mean, we can see some prospects with increasing clarity. A nation-wide movement to extend state support to kindergartens as a necessary and legitimate part of public education is already in progress and will prevail, perhaps with some federal subsidy in the picture. The kindergarten in some cases may include optional attendance of four-year-olds. And most certainly the curriculum in the kindergarten will be strengthened to provide more intentionally for concept development and language development, hopefully with a proper respect for the range and value of human and nonprint resources for learning. The shape and control of schools for two- and three-year-olds will remain of very great concern to all of us in the immediate years ahead.

Adult-Child Ratios and Relationships

No area of concern in elementary education is more amorphous at this point in time than that which we may identify as the area of adult-child ratios and relationships. A ratio such as one teacher to 25 pupils, for example, may no longer seem either ideal or possibly even meaningful. Also the nature and role of adult-child interaction has had such an enlargement in our thinking that we may feel uncomfortable in talking about a single teacher with one group of children as adequate to provide what is needed in the teaching-learning relationship.

The rapid expansion of paraprofessional personnel in the elementary school, particularly in the early years, has alerted us to the many dimensions of adult-child relationships that can be expanded when another adult, even an untrained or in some cases a relatively uneducated adult, is at hand. The new insights we are gaining from research on mother-child interaction as the base of concept development, as in the studies reported here by Henle and Shipman and Hess, as well as the understandings from linguistics on the importance of adults in language development, are relevant. We have come to value having more adults than one in our teaching situation.

Similarly, and often from the same federal sources that have supported the increase in paraprofessionals, we have had a very rapid expansion of auxiliary teachers in the school and ancillary teachers and other professional personnel on call. As Frazier points out in his paper, in marshaling new adult resources to handle specialized teaching activities and deal with specialized learning problems, the teacher becomes in effect an executive. In the process, old ratios and relationships may fail to maintain their meaning.

Then, too, the ventures in cooperative planning and teaching have helped develop a new conviction that many heads are better than one when it comes to studying and assessing a child's needs and that there are many ways to provide for access by children to a range of teacher competencies that can protect against fragmentation in the program and befuddlement in the learner. New units of children, such as the 100 suggested by Alexander as the base unit in the middle school, are being proposed, with new ratios of adults to this number of pupils that go beyond anything we have been able to imagine before.

The area, again, is in flux. We cannot generalize very readily against such a shifting ground. Yet we may be able to agree that new ratios of adults to children are in the offing that will be far more generous than in the past. We may also foresee the definition of a much more extended range of relationships to be valued in the new wealth of adult resources in the school. Much remains to be thought through, with a recurrent uneasiness, about maintaining between child and teacher or teachers, or between the child and the adults about him, the deep and enduring bonds that still would seem essential to most of us.

Patterns of Organizing the School

For ease of handling and also to enable us to broaden our thinking to include problems of inter-level articulation, we may wish to separate our concern with patterns of organizing the elementary school from the concerns we feel about adult-child ratios and relationships. Certainly we have enough to think about in the area of organization to warrant treating it separately.

While more attention has gone to ungraded grouping than to any other aspect of organization during the past ten years, we may feel with Alexander that the question of how to group children depends on our conception of curriculum. Nongraded grouping per se can be used, if we will, under many kinds of organization. The prospect most assuredly is that as the program for children, or part of it, is spelled out more precisely in terms of successive levels, tasks, or targets, we should be able to put each child in closer touch with what he is ready to learn.

Whether this consonance of learner and curriculum will be achieved by some overall plan of grouping and regrouping in the familiar class units of 25 or 30 or whether child-curriculum correspondence will be sought in some other way may depend on fresh developments. If the larger multiple-class unit of, let us say, 75 or 100 prevails as the new home base, we may see many kinds of internal grouping to take care of personal growth needs. If programming of the facts and skills segment of the curriculum proceeds apace, we may find that the schools now experimenting with independent study in learning laboratories will become prototypes for the organization of at least part of the school day.

But the problem of thinking out suitable patterns of organization for the elementary school as a whole will certainly remain. The middle school, described so well by Alexander, is already proving attractive in many parts of the country. The promise also is that the early years will be organized differently if not separately into a two- or three-year block with a new name of its own—the nursery-kindergarten, the pre-primary, or the early school.

The least that one can anticipate in trying to speculate about the organization of the new elementary school is that the problem of articulation may exist at both ends of the present primary grades. Indeed, the problem of pre-primary and primary articulation under Head Start is already very much with us and is partly responsible for the President's proposal to extend Head Start upward. The middle school may prevail in one of several forms—as a substitute for an unsatisfactory junior high school, as an extension of intermediate elementary education, or as something else again. The terms "graded" and "nongraded" will doubtless continue to be useful as the distinctions they have represented become absorbed into the redefinition of curriculum and teaching.

From a dozen vantage points, the functions and competencies of elementary school teachers are being analyzed and redefined. Thus, our concern in this area must encompass many distinctions that seem likely to add up finally to a singularly different picture of the new teacher.

Teacher Functions and Competencies

The research into the nature of teaching is suggesting that as we understand more about teaching, we may be able to prepare teachers more effectively and may have a better base of working with teachers on the job, individually and in group study. The scope of research in teaching or "intervention," Berman suggests in her paper, is still expanding.

Their role in the national curriculum projects and programs has given teachers new status, which, as Frazier points out in his paper, is one of the factors leading to a variety of new models of the teacher as a person with enlarged responsibilities. These responsibilities, Berman indicates, may be further enlarged as the roles of contributors to curriculum making are spelled out more fully.

The better education of teachers on the job has been a major topic of concern during the past decade. Miel's report of changes in in-service education over that period and her proposals for a more comprehensive program indicate the growing size and complexity of this dimension of improving teacher competency. The political aspects of teacher status are also very much in the picture.

Teaching in the new elementary school will certainly call for the performance of new or generally unfamiliar functions and for the better performance of all functions, both the new and the old newly understood. It will call for opportunities on the job for individual study and planning and for better organized, more comprehensive, and more effective opportunities for group study. It will require, too, surrounding the teacher with the climate and support that will enable him to make the most of new functions and competencies.

Content and Curriculum

The excitement of content redevelopment in the elementary school grows rather than lessens as we assess what we have been through with the new mathematics and try to get ready to handle changes in the other subject fields. We are making an effort also to relate these changes to existing and prospective curriculum designs for children.

In the process of review and preparation, we may need to underline certain guiding questions: What relevance does the new content have to established purposes? Or what new purposes does it presume? At what points if any can we relate new content in different fields? Is balance of attention among fields at stake? Or balance among purposes? Into what kind of overall design do we expect content to fit?

Against some such set of perplexities, we view the claims of competing proposals for development in any subject field. In her report in this booklet, Fraser treats the proposals for new social studies content as a case example. She seeks out common elements in these proposals and makes certain predictions concerning probable directions. She also states some principles from the experience in other content fields that may be useful in redeveloping the social studies.

Among the predictions Fraser makes is that the "expanding environment plan for establishing grade-level themes" will survive, although with more flexible and broader themes. What other and newer curriculum designs will look like is of interest even though the emphasis on development of individual subject areas continues in the spotlight.

In her paper, Berman examines many facets of curriculum design, including some content that seems to her to be of increasing importance, principally extensions of communications skills, processes of systematizing, and the nature of attachments. She also proposes a background of beliefs about the nature of man and of curriculum development that she considers of first importance.

The search for content that is more relevant to today's needs and for sharper definitions of these needs out of a broader cultural context will certainly be maintained. However, as we work ahead through successive redevelopments by fields, the search for unity among new purposes and for new designs to unify the learnings of children may also be expected to grow.

The education of younger children, adult-child ratios and relationships, patterns of organizing the school, teacher functions and competencies, and content and curriculum—these are certainly abiding centers of our professional interest although not in themselves an adequate categorical system to account for everything with which we must be regularly at work in elementary education. They are centers of current concern, however, as we would no doubt all agree. Let them stand here, then, as the framework of reference that the reader may find of some use as he moves on now to explore the resources of the eight papers that follow.

PART I

New Knowledge about Children

On Understanding

MARY HENLE

THIS paper will deal with selected issues in the psychology of understanding. After a consideration of the nature of understanding, we will examine the need for developing tests of understanding and then discuss possible means of testing. Finally, we will present some reflections on teaching for understanding.

As one approaches these problems, one is astonished by the essential lack of relevant psychological literature, a remarkable lack in view of the central position that learning occupies in contemporary psychology. What follows draws in part on a small but valuable literature and in part on observations made during the past year or so when the writer was working with Educational Services, Incorporated. (E.S.I. is not, however, to be held responsible for any conclusions I may draw.) For the rest, we will simply have to grapple with problems.

The Nature of Understanding

How shall we understand understanding? In what follows I shall give the term two meanings that would probably be one in a world in which everything were known. Understanding will be taken to mean, (a) clarifying the structure of material, and (b) relating items to a relevant context.

1. In the simplest cases, understanding means making clear the structure of the material with which one is dealing. I will discuss two ways in which we can clarify material, without suggesting that these are the only ways.

a. In many cases, clarifying the structure of material means simplifying it, getting down to its essentials.

Sometimes getting down to essentials means finding out what the material consists of, as when physicists learned that all matter consists of combinations of a limited number of elements. The tremendous variety of substances in the world could now be seen in terms of a relatively small number of atoms—a radical simplification. Later reductions of these elements to still more minute ones have pushed the understanding of matter still further.

On a more modest level, a child learns that the number 25, for example, consists of two 10's and a 5. Then he understands it: he has reduced it to a simpler structure. He has now increased his grasp of the relation of 25 to other numbers and has achieved a basis for simple arithmetical operations with this number; these gains are marks of understanding, as will become clear. The reduction, of course, must be to a relevant structure. It would be much less helpful to know that 25 consists of $23 + 2$, or even of five 5's, since the base of our number system is 10.

Getting down to essentials sometimes means seeing material in a different and simpler way even where there is no question of reduction to elements. In geometry, a child is asked for the first time to find the area of a parallelogram. What is a parallelogram but a rectangle in disguise? The student who changes the new figure into a rectangle and proceeds from there has made altogether clear the structure of the figure. We say that he has understood the problem.[1]

In still other instances, getting down to essentials means stripping away details. For example, we have understood a passage if we can pick out the essential ideas. If we have omitted something essential, or if we focus on the less important aspects, our understanding is more limited.

In the same way, social scientists generalize about a culture or an era. We know more about the society of the Kalahari Bushmen if we know that it is a hunting and gathering society than if we describe the ways in which food is prepared. Or again, we understand a good deal about the cultural atmosphere of eighteenth century Europe if we describe it as an age of rationalism: we know something about its philosophy, its political ideas, and its art, as well as the relation of all these to earlier and later trends. We have achieved a great organizing principle in terms of which we can understand a mass of detail.

Now a word of caution is necesssary. *Over*simplification does not produce understanding. If all we know about the eighteenth century is that it is an age of rationalism, we have understood nothing. We have only acquired a label, which may actually impede understanding. The idea of rationalism or of a hunting and gathering society—or any other organ-

[1] This example is taken from M. Wertheimer. *Productive Thinking.* (Enlarged edition.) New York: Harper and Brothers, 1959.

izing principle—helps us to understand a culture only if we see it as specifically related to the concrete phenomena of the culture, to the details of which we have stripped it.

b. Another way in which we may clarify the structure of material is to bring out what is only implicit.

We broaden our understanding of material when we can answer the question: what does it imply? And by the same token, we have understood the implications by deriving them from the original statements.

Here our clearest examples are simple logical ones. If we know that all dinosaurs are extinct, and if we know further that the brontosaurus is a dinosaur, it follows inevitably that the brontosaurus is extinct, and no reasonable person would expect to meet one on his next trip west. We can say that we understand this conclusion because it was derived from, or implicit in, the original statements. No other conclusion from these statements is possible.

Much discovery and understanding in science is of this nature. For example, physicists can derive the roughly spherical shape of the heavenly bodies from the law of gravitation (if they also know certain conditions under which gravitation has to act). We say that we understand the shape of the heavenly bodies because it follows from this principle.

2. Now let us consider a second meaning of understanding. In addition to understanding by making clear the structure of material, we say we have understood when we are able to relate some item to a context.

I remember a conversation in which an acquaintance and I were praising another individual. We took turns describing his merits, apparently in perfect understanding. This went on for some time. It was only when I added: "He's a gentleman to the tip of his tail," that we realized that we were not talking about the same individual. My acquaintance had a human friend in mind, while I was talking about my cat!

How could we misunderstand each other so completely and not know it? Each of us had a picture of the individual we were discussing, a context of attitudes and feelings and experiences. As it happened, the two pictures were altogether different because we had very different individuals in mind. But we did not become aware of this since each of us understood every remark in the context of his own view. Understanding each item in our own way, we thought that we were understanding each other. It never occurred to either of us to ask, "What do you mean?" because everything seemed to make sense.

More generally, an item does not usually have meaning in itself but rather takes on meaning in the light of the whole body of knowledge, attitudes, feelings, and beliefs with which we approach it. Since people often differ with respect to this context, they will understand the same information differently.

If adults can easily misunderstand each other because of the differing contexts in which they place the same event, such misunderstandings are probably even more frequent between adult and child. We cannot know all the ideas the child brings with him to school, but we can safely assume that many of them are generalizations from insufficient experience, without adequate opportunity for correction by later experience. We can be reasonably sure, in any case, that the child will often place a particular bit of information in a context different from his teacher's and that his understanding will therefore be different. New material is understood in terms of the child's existing ideas in ways that may surprise us.

For example, an interviewer[2] was discussing the life cycle with a ten-year-old boy. To get at the value of the juvenile period for the human being and for the baboon, he asked what happens during this period:

> Gary: They get in trouble a lot, and they go through this stage where they break windows and stuff, and cause trouble, and steal things.
>
> Interviewer: You are a juvenile. Do you do that?
>
> Gary: No! I am a very young juvenile.

This boy had clearly known the word "juvenile" only in connection with "juvenile delinquency." Failure of understanding can occur because an item has been placed in an inadequate context—a wrong one, too narrow a one, an inappropriate one. In such cases, both teacher and pupil may assume that the child has understood. And indeed he *has* understood, since he has placed the material in a setting in which it makes sense to him. It does not occur to him to ask for further explanation of something that already makes sense. It may therefore be some time before he—or his teacher—learns that his understanding was inadequate. Thus, while placing new material in context is the basis for understanding it, this same process makes it difficult to know whether correct understanding has occurred.

Difficulties in Knowing When Understanding Has Occurred

There are further difficulties in knowing whether something has been understood. It would be simple indeed if we could identify understanding with achieving a correct answer. Correct answers do not ensure understanding, nor do wrong ones necessarily indicate misunderstanding. To return to the problem of the parallelogram, it is said that a child understands how to find the area of this figure if he sees it as a disguised rectangle. Another child may correctly solve the same problem by following a series of memorized steps without any insight into the structure of the figure. Both students may get the answer right, but only the first has understood it.

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[2] James J. Gallagher, now of The Greater Cleveland Educational Research Council.

Again, a child may understand a problem, but arrive at a wrong answer because of a careless error in carrying out a step. Thus if we wish to know whether pupils have understood us, we must do more than look to the correctness of their answers. We must be more interested in *how* an answer was achieved than in *what* it is. A "good error" may be a better achievement than a correct response without understanding.[3]

Also, not all material is equally understandable, at least in terms of our present knowledge. Consider again the definitions of understanding given above. If we clarify the structure of material by deduction, by making its implications explicit, the conclusion, as we have pointed out, is inevitable. On the other hand, if we clarify by simplification we can do this, within limits, of course, in various ways and at various levels. The inevitability is often lacking. Again, to understand an item by placing it in context permits a certain range of understandings, as we have seen. The meaning of the item is merely plausible, not inevitable. The greater the range of interpretations possible, we may say, the less completely understandable the material—and for our purposes, the harder it is to know whether it has been understood in the manner we had hoped.

Even with the same material, understanding is not an all-or-none matter. We may get a glimmer before we achieve full insight or we may sense that something is related to something else before we are able specifically to derive the one from the other. In the same way, scientists understand a set of events in terms of a theory, and later understand it more fully in terms of a better theory. One reason we find new things on rereading great writers is that our understanding has grown; it is not that Shakespeare has said something new since our previous reading but that we have come to understand more of what he was saying all along. Understanding is a growing process, and this, again, makes it difficult to evaluate.

There is still another sense in which understanding is not a possession that we have or do not have, but a process of change, and this, too, makes for difficulties in assessment. Understanding is often slippery: now we have the point and now we have lost it. The experience is not an uncommon one. We look at notes we made some time earlier—a new idea we have jotted down or a comment on something we have read—only to find that we no longer understand them.

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[3] For the distinction between good and stupid errors, see: W. Köhler. *The Mentality of Apes*. Ella Winter, translator. (Second edition.) New York: Harcourt, Brace & World, Inc., 1927.

I, myself, had never regarded this slippery character of understanding as anything particularly important until Helen Kenney[4] and I tried to teach a small group of fifth-graders a structural definition of the noun: an (English) noun is any word that takes the plural. The definition may not be particularly illuminating but it works. Indeed there are fewer exceptions to it than to the commonly taught definition: a noun is the name of a person, place, or thing. The lessons were carried on individually in tape-recorded interviews with ten children who showed a considerable range of tested intelligence. They were all pupils at a public school in Newton, Massachusetts; all were members of an experimental language class conducted by Educational Services, Incorporated.[5]

The new definition had been taught in class a few days before the interviews, along with a simple method of testing words to identify nouns. All this was lost by the time of the interviews and had to be taught again. Much more interesting is the fact that the pupils kept losing the new definition in the course of the discussion. In an interview lasting perhaps 20 minutes, a child might grasp the point only to lose it again, half a dozen times or more. The most brilliant girl in our group lost the new criterion five times in a brief interview, another very bright child lost it nine times, while the least gifted member of the group lost it only twice.

This fluctuating character of understanding, which was so conspicuous in our results, has not to my knowledge been mentioned in the psychological literature. In retrospect, it is easy to see why the pyschology of learning had not prepared us for this finding. The typical learning experiment studies many individuals over a brief period of time and thus leaves little room for this phenomenon, which can only be studied over time, in intensive dialogue with the individual.[6]

How can we interpret this unexpected finding? I think that, at the outset, we can rule out lapses of attention as responsible for the fluctuations of understanding. The children were, without exception, highly cooperative. The class experience in general, and the interviews in particular, carried prestige, as we realized when another E.S.I. class threatened strike action if they did not get their "private interviews." The interviewers, for their part, had brought their full resources to the struggle with the noun.

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[4] Now of School of Education, Northeastern University.

[5] The classes in connection with which these interviews were conducted were taught by Gloria Cooper of Educational Services, Incorporated, who also helped us plan the interviews.

[6] In another connection, the limitations of short-term, "do and die" techniques in investigations of learning have been pointed out by H. F. Harlow. See his "The Formation of Learning Sets." *Psychological Review* 51: 51-65; 1949.

It seems more likely that these fluctuations occurred because the material we were teaching was not fully understandable. Our definition works empirically for English nouns, and the testing frame employed follows from it. Yet there is nothing about nouns that requires this as a distinguishing characteristic; in French, for example, you cannot distinguish between nouns and verbs in this way. Our explanation of the noun lacks the inevitability that we found in material that is fully understandable.

If our material was not fully understandable, the finding is no less interesting for this reason. It is probably no less understandable than much school material outside of mathematics and science.

Two considerations in our data support the conjecture that these fluctuations in understanding occur because the material is not fully understandable. First, I mentioned that the two brightest pupils showed the greatest fluctuations, while the slowest showed very few. If this should turn out to be a real difference, it suggests that the duller child puts everything in the rote learning mill, regardless of its nature, while the brighter one is more interested in trying to understand new material than in memorizing it. The latter process could work to the apparent disadvantage of more intelligent students in the early stages of the learning of partially meaningful material.

Another consideration also suggests that the fluctuations in understanding are related to the nature of the material. A week or ten days after the first interview the children were brought back for a second session. First we checked on the noun, reminding our students of it when necessary. Next the verb was introduced as any word that can take the past tense. Now fluctuations of understanding practically never occurred. While other explanations are possible, one is tempted to look to the nature of the definitions. This one clearly seems more meaningful than the definition of the noun: we seem to be dealing with a more intrinsic property of the verb than of the noun. This impression perhaps gains some support when we recall that Aristotle gave an essentially similar definition of the verb: "A verb is that which, in addition to its proper meaning, carries with it the notion of time." (Incidentally, it is interesting to note that Aristotle, too, had trouble with the noun, essentially defining it as not a verb.)

Another possible interpretation of the fluctuations of understanding that we found may lie in the relation between the previously learned definition and the new one which we offered to replace it. The advantages of the new definition may be more apparent in the case of the verb than of the noun. To describe a noun as the name of a person, place, or thing is not a bad way of identifying this part of speech, especially for fifth-graders who have trouble with plurals. On the other hand, a verb is clearly not necessarily an action word, as the traditional definition has it; the new definition eliminates the difficulties of the old one without introducing new problems. It may be, in short, that replacement results in fluctuations of understanding when the replacing material is not sufficiently superior to the old; competition between the two explanations may produce the fluctuations.

Finally, it should be mentioned that the difference between noun and verb with regard to fluctuations of understanding may be a matter of the method of learning employed. Although most of the children were given help, all in some sense discovered the definition of verb, while the definition of noun was simply presented, first in class then in interview. It may be that what one discovers is less subject to fluctuations in understanding than what one is told.

In short, a good deal of research is needed before we will understand our findings on the fluctuations of understanding. I present the results in their present incomplete form because the phenomenon itself has important bearing on classroom practice.

To return to the main theme from which these results have led us: I pointed out that, for a number of reasons, it is difficult to know when understanding has occurred. One of these reasons we now see to be the slippery nature of understanding itself.

Testing for Understanding

Because it is often difficult to be sure whether something has been understood, it is necessary to devise tests of understanding. In discussing the nature of understanding, I indicated that the experts have not offered much help. In the case of our present problem, however, I am in the fortunate position of being able to call upon expert opinion. The experts on matters of learning and understanding are, of course, professional learners. And right in our classrooms we can find large numbers of such professionals. Why not consult them about how to test for understanding?

Margaret Lane, who teaches teachers at the University of Michigan and children at the University School in Ann Arbor, did just that.[7] She asked a class of seventh-graders: How do you know when you have learned something? Most of the children, being professional learners, interpreted the question to mean: How do you know when you have understood something? Let us look at typical answers and compare them with what psychologists have to say.

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[7] I am grateful to Miss Lane for making this material available to me.

Of course, some children gave answers that, while not wrong, are not of much help. Thus one seventh-grader replied:

> By how you feel. You feel good.

You do feel good when you have learned something, but this is not enough. You may feel good because you think you have understood when actually you have not. We must look further.

Other children emphasized the ability to recall as an indication that they had learned something:

> The way I know that I have learned something is it goes in my mind and stays there. Like if someone tells me something and I forget it, then I *didn't* learn anything!
>
> You can answer questions someone asks you about your subject. You feel fairly confident that if you took a quiz you would pass it. . . . On my Egypt report, I knew right away after it that I didn't learn much because all we did was goof off.
>
> If someone asks me about it and I can answer it when I couldn't before.

Again, however, as we have seen earlier, a correct answer does not necessarily mean that one has understood. Memorizing can produce correct answers—in children and in parrots. We must look still further.

Some students set their standards for understanding beyond recall as it is conventionally interpreted to something approaching mastery of the material. This may be indicated by intelligent participation in discussion, including asking as well as answering questions. Mastery may also be shown by appreciation of the material one is studying.

> . . . When my parents consider me able to discuss it with them thoroughly. . . . When I can enjoy and appreciate the subject.
>
> If I can take part in a discussion about that particular thing, give reasonable answers and questions, it shows that I have learned something.
>
> Sometimes you don't know you have learned something until you talk to someone about the subject and can participate.
>
> When you have fun doing something.

Psychologists and educators, too, have been interested in discussion procedures, as well as in the questions children ask, as approaches to understanding.[8] Still, we have a long way to go in learning how to evaluate the quality of a child's participation in discussion and the quality of the questions he asks.

Appreciation of material as an index of mastery of it has yet to be investigated. It is an interesting hypothesis that we owe to these seventh-graders.

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[8] For example, Babette Whipple has been conducting "think-ins" or discussion groups to assess the understanding of children participating in E.S.I. courses.

Several other children showed themselves to be in the forefront of psychological thinking by saying that you know that you have learned something if you can teach it to someone else. This method has been used, so far as I know, only by Professor Mary Alice White of Teachers College, Columbia University.[9] The following samples indicate that it is well-regarded among members of the learning profession:

> When I have learned something I am able to explain what I have learned to someone else. . . . I am able to stand up and teach it to someone else in a meaningful way.
>
> I know I've learned something when I can remember it, and clearly understand it, and if I can tell someone else about it so he can at least understand it clearly too. When I can do this, I believe I know it.
>
> When you can teach somebody else what you know.

One child suggested that you have understood something when you can go on from where you were to more advanced material:

> When I really know a subject, I can read books . . . on the subject and readily learn more from them.

This procedure, I believe, has not been investigated specifically as a test of understanding, though it is implicit, of course, in the practice of teaching and learning.

There remains one method of testing understanding that the seventh-graders have not found out about. This is a bit surprising, because it is the most powerful method we have: the method of transfer. If, after learning something, you can do something else that you could not do before the original learning, we say that transfer has occurred. In connection with the problem before us, the important thing is that one consequence of understanding is the ability to transfer.

For example, if a child has understood our problem of finding the area of a parallelogram, he will now be able to find the area of all sorts of unfamiliar figures if only they, like the parallelogram, are disguised rectangles. By the same token, if he has really understood it, he will not try to apply a new idea or new method to material for which it is inappropriate.[10]

In order, then, to find out whether a student has understood something, we may test for transfer to new material. We need to find out whether he can tell the difference between cases to which the new idea applies and those to which it does not. If he shows transfer where it is appropriate, and only where it is appropriate, we may say that he has understood.

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[9] Dr. White has a publication in press; Professor Roger Brown of Harvard University has also discussed this procedure as a test of understanding.

[10] Wertheimer (see note 1) has stressed the need to include such negative instances in tests of understanding (Chapter 1).

Closely related to transfer, and perhaps a special instance of it, is diagraming. We often think of diagraming as an aid to understanding, but like other aids, it may also serve as a test of understanding. In making a diagram, we represent in spatial terms an idea originally presented in a different form. For example, we may use a line to represent the life cycle or historical time, and we can place various periods or events on the time line to represent their sequence. Again, in physics, we may use arrows to represent forces. Does a child understand a particular concept? We are often able to represent it spatially. If he is able to choose the correct one of several diagrams, we can say that he has understood.

In all these cases, the diagram has transposed an idea to an appropriate visual form, in the same way that a melody may be transposed from one key to another. Or, as in transfer, we may say that we have applied the idea to new material.

Perhaps some will be surprised that paraphrasing has not been included among tests of understanding. At some ages this is, no doubt, a useful test. Preliminary observations of fifth-graders suggest, however, that for them at least, this is a very difficult task, so difficult that they sometimes lose the very meaning they are trying to convey in the effort to rephrase it. Failures under such conditions are as likely to be due to inability to paraphrase as to failure to understand. Obviously, paraphrasing can only be used as a test of understanding with individuals able to paraphrase.

We have considered now a number of tests of understanding. Which shall we use in any given case? This is not an easy question to answer. Participation in discussion, for example, is easy to arrange, but its quality is difficult to assess. We know very little about how to judge the child's appreciation of material. Teaching another pupil what one has learned seems to be a particularly promising method, and it is to be hoped that it will be studied further. It must be noted, however, that it involves devising tests of the understanding of what the pupil has learned from his child-teacher. Going on from where you were is an excellent long-range method of relying on previous understandings, but often this device is not designed to indicate specifically where difficulties in understanding exist. Transfer is a very powerful test of understanding, but devising tests of transfer in some areas is difficult. Such tests are simpler to design in mathematics and science than in literature and social studies, because, in the former fields, ideas are more precise and principles usually clearer. Diagraming, too, is useful where it can be applied.

Thus the choice of methods and the actual devising of tests of the understanding of specific materials remain the tasks of the teacher and the curriculum maker. It is hoped, however, that guidelines such as the ones offered here will help to make that most important discrimination between testing for mere recall and testing for real understanding.

Teaching for Understanding

Twenty-five years ago Katona demonstrated the superiority of learning by understanding over learning by memorizing.[11] Let us recall his findings. What has been understood will be held in memory far longer than like material that has been memorized. Furthermore, we are able to apply what we have understood much more widely than what we have memorized—so much so that, as we have seen, transfer (or the application of learned material to new cases) may be used as a test of understanding. This is no small advantage at a time when knowledge is accumulating so rapidly that no one has enough time in school to learn what a well-informed person needs to know. Again, learning by understanding is often more economical than memorizing; even apart from transfer, we can frequently acquire more material in a given time in this way. Besides, a child will soon lose interest in memorizing, while understanding holds his interest and attention much longer.

It must be remembered, of course, that it is not always possible to choose between memorizing and understanding. As was pointed out earlier, not all material is equally understandable. We have also seen, however, that our understanding of given material may be more or less complete. Thus our question amounts to this: in any particular case, how can we teach for the greatest possible understanding?

We might now reexamine what has been said about understanding in order to make clear its implications for teaching, but space permits only a few brief remarks.

Generalizations clarify concrete material only if they are specifically related to that material. This suggests a major condition of the use of induction in teaching is to infer general principles from particular facts. Induction is valuable precisely because it requires the student to see the living relationship between a generalization and the concrete data on which it is based. A principle that has been taught, without reference to data, is in greater danger of remaining entirely abstract, a verbal formula only, a label. Thus, for induction to be an effective method of instruction, the child must have the relevant facts before him or readily available; and they must be sufficiently organized if a principle is to emerge from them.

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[11] G. Katona. *Organizing and Memorizing*. New York: Columbia University Press, 1940. For a more recent discussion, see: J. S. Bruner. *The Process of Education*. Cambridge, Massachusetts: Harvard University Press, 1960.

To return to a previous example, our fifth-graders were able to arrive at a generalization about verbs from carefully selected lists of sentences, a generalization that they had not achieved on the basis of their very extensive, but unorganized experience as speakers of the language. Again, in our enthusiasm for methods of discovery, we sometimes forget that elementary school children cannot be expected to make sensible generalizations about a new culture, or even their own culture, without having access to enough of the facts, adequately presented.

I do not mean to suggest that we should discourage guessing, stifle the imagination, or cut off fantasy in teaching. Guessing has its own place in the educational process, as Bruner [12] has pointed out, but it is not the same place as induction. My research on logical thinking in children suggests that they tend in thinking to make too much of too little, to generalize from too slim an empirical basis; and the same may be true of all of us. It is, of course, important to encourage students to make inductions—we do not want children who, in Thurber's words, "don't know anything but facts"—but we must also tame their inductions. Indeed, to applaud inductions that fall flat on their face in their first real confrontation with evidence is as effective a way as I know of discouraging the inductive process.

Now let me come to one other implication for teaching of our consideration of the nature of understanding. We have seen that understanding is not something that is ever over and done with, but that it is an active, changing process, a process of growth. Furthermore, knowledge is advancing at a rate hitherto unknown; with the advance in factual knowledge, and also as a condition of it, our theories, our basic ideas and interpretations, are necessarily undergoing revision. Unless we are prepared to rethink our ideas, they are in danger of becoming obsolete.

We adults seem, on the whole, not to be remarkable in our ability to reexamine our ideas. If the children now in school do no better than their elders in this respect, they, even more than we, will be closing off from understanding an increasingly large part of the world.

Perhaps one means for making clear the need for rethinking is the spiral curriculum which, as Bruner discusses it,[13] is built about the revisiting of ideas and topics in the changing terms appropriate for children

[12] Bruner, *ibid.*, p. 64 f.

[13] *Ibid.*, pp. 52-54.

of different ages. Such a curriculum not only deepens understanding of the ideas in question, but shows that understanding itself is a deepening and changing process.

Modest excursions into the history of ideas (perhaps particularly in science) can likewise show the changing nature of our conceptions of the world. And most important, of course, is the model of a teacher who is himself ready to examine alternatives, to consider exceptions, to give new ideas a hearing.

However achieved, the readiness to reexamine ideas is less a desirable goal than an absolute necessity in a rapidly changing world. If we can develop this readiness in children, we can give understanding its true meaning as a great adventure that lasts a lifetime.

Conceptual Development in Preschool Children: Effects of Home and Family[1]

VIRGINIA C. SHIPMAN AND ROBERT D. HESS

THE research project reported here is concerned with assessing the cognitive environments of urban preschool children and studying the effects of differing environments upon the cognitive behavior and motivation of the young child. In attempting to determine the variables in the preschool child's environment which appear to facilitate or interfere with ensuing cognitive growth and educability, the project has focused upon the role of the mother as a socializing agent in areas of behavior usually associated with success in school: language, concept development, motivation for achievement, problem-solving strategies, curiosity, and the like.

The general problem has been to understand how cultural experience is translated into cognitive behavior and academic achievement. This question, however, developed out of a prior concern for understanding what is meant by cultural deprivation or disadvantage. Considerable documentation of the depressing effect of social and cultural disadvantage upon academic ability already exists. The more basic need is to understand the mechanisms of exchange that mediate between the individual and his environment. We hope to be able to conceptualize social class as a discrete array of experiences and patterns of experience that can be examined in relation to the effects they have upon the emerging cognitive equipment of the young child.

A major focus of our research has been the linguistic environment and the communication patterns between mother and child since, in agreement with Vygotsky and Luria,[2] we believe that the level of language development is a function of the linguistic environment in which the child develops, and that thought development is to a considerable degree dependent upon language development. However, the significance of the maternal environment lies not only in the amount of verbal exchange, but also in the structure of the interaction between learner and teacher.

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[1] This research is supported by the Research Division of the Department of the Children's Bureau, Social Security Administration, Department of Health, Education, and Welfare; Ford Foundation for the Advancement of Learning; and grants in aid from the Social Science Research Committee of the Division of the Social Sciences, University of Chicago.

Drawing from the work of Basil Bernstein at the University of London, we have found it useful to speak of maternal teaching styles both in terms of communicative modes (whether they are elaborated or restricted; that is, whether differentiated, more precise, and individualized, or stereotyped and condensed) and also of family control systems (whether oriented to status or person; that is, whether the child's behavior is regulated by ascribed role norms or whether the unique characteristics of the situation modify such demands). Such concepts have proved efficacious in predicting whether a child will take an assertive, exploratory, or passive, compliant approach to his environment and whether reflective or impulsive behaviors will occur in problem-solving situations.

From our work at the Urban Child Center we would argue that: (a) the behavior which leads to social, educational, and economic poverty is socialized in early childhood—that is, it is learned; (b) the central quality involved in the effects of cultural deprivation is a lack of cognitive meaning in the mother-child communication system; and (c) the growth of cognitive processes is fostered in family control systems which offer and permit a wide range of alternatives of action and thought, and that such growth is constricted by systems of control which offer predetermined solutions and few alternatives for consideration and choice.

The Nature of the Study

We present here a few of the findings that have emerged from our study of the cognitive environments of urban preschool children, findings that we believe are indicative of differences in preschool socialization that have consequences for cognitive growth and educability. We have chosen to focus on the child's ability to categorize since categorization is one of the most commonly used ways to study cognitive development. We will look at the four-year-old's ability to make verbal classifications, his ability to give labels and to discriminate and choose relevant properties of objects; and then we will observe how this is related to his social status, his sex, and his mother's preferred mode of categorization and more general teaching style.

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[2] References are listed at the end of the paper.

For our project, a research group of 163 Negro mothers and their four-year-old children was selected from four different social status levels. Group A came from college-educated professional, executive, and managerial occupational levels; Group B came from skilled blue collar occupational levels, with not more than high school education; Group C came from unskilled or semiskilled occupational levels, with predominantly elementary school education; and Group D came from unskilled or semiskilled occupational levels, with father absent and the families supported by public assistance (ADC). Groups were equally subdivided by sex of child and, except for Group A, by private and public housing.

The mothers were interviewed in their homes concerning their activities with the child, their daily schedules, the availability of cognitive and intellectual stimulation, and other features of the home environment thought to be related to cognitive development. The mother-child pairs were then brought to the university for testing and for an interaction session which required the mother to teach the child three simple tasks that she had been taught by a project staff member. One of these tasks was to sort or group a number of plastic toys (cars, spoons, and chairs that were red, yellow, and green) by color and by function. A second task was to sort eight blocks that differed in color, size, shape, and mark by two characteristics simultaneously. The third task required the mother and child to work together to copy five designs on a toy called an Etch-a-Sketch.

During his second testing session at the university, each child was administered the Sigel Conceptual Style Sorting Task. On each of 20 trials the child was asked to pick one of three pictures to go with the test picture ("the one that belongs best with it or looks like it"). For five of the trials, ambiguous pictures of human figures were used; the remainder were black and white photographs depicting familiar persons, animals, or objects. After he had pointed to one of the pictures, the child was asked to explain his choice. Rationales were classified as *descriptive* (having direct reference to manifest stimulus attributes, a distinction being made between *descriptive-global* and *descriptive part-whole* responses which use all or part of the stimulus, respectively, e.g., "men," "nurses," "have guns," "have shoes"); *relational-contextual* (stimuli having functional or thematic interdependence, e.g., "mother and baby," "the men are fighting"); *categorical-inferential* (stimuli being independent representatives of a class based on inferred or nonobservable characteristics, e.g., "we eat them," "they go in the water"); *nonscorable verbal responses,* (e.g., "looks like it"); *disjunctive responses* (e.g., "this is a truck and this is a horse"); or *nonverbal* (e.g., child points, edges cards, etc.).

The mothers were given the adult version of the Conceptual Style Sorting Task which required each of them to make 12 sorts from a random arrangement of Make-a-Picture Story figures. Each mother could use as many figures as she wished in a group, and could re-use figures if she gave a different rationale for her grouping. Rationales for the sorts were scored according to the same categories described above. Stanford-Binet (Form LM) IQs and Wechsler Adult Intelligence Scale verbal IQs were obtained a few weeks earlier.

Findings Related to Social Studies

The most striking finding for the children's performance on the Sigel Sorting Task comes from the comparison in percent scorable responses by social class (see Figure 1). As social status decreased, percent scorable responses decreased, from 51.2 percent to 15.1 percent. In virtually all categories (the exception being one small reversal between the lower-lower and ADC groups for the descriptive part-whole category), the mean score for each of the cognitive style dimensions decreased with decreasing social class level (see Table 1). These differences are greater than would be expected on the basis of the mean IQ scores for the groups (109.4, 98.6, 96.3, and 94.5, respectively). Social status differences in the ability to give verbal rationales for categorizing responses are also revealed in the mean scores for nonscorable responses, with the means for both nonscorable verbal and nonverbal responses progressively larger from upper middle class through ADC (see Table 2).

Since there is considerable variability among our groups and mean scores may reflect the contributions of small numbers of children, it is important to note the volume of responses within each category; that is, the mean percent use of a particular category as well as the number of children able to respond and use a particular category (see Tables 3 and 4). It can be seen that the differences obtained in mean scores (Table 1) provided consistent results with these methods of analysis. As was hypothesized, we have found that children from lower-class homes do poorer on a cognitive sorting task requiring verbal classifications. The result of the decreased linguistic interaction between parents and children observed in working-class homes and the restricted language styles employed, as reported by Bernstein (1964) and in earlier papers from our project (Hess and Shipman, and Olim *et al.*), is that these children appear hindered in the discrimination and labeling processes required for classifying. Although a knowledge of naming does not predict the classificatory behavior used, words encourage us to think in terms of categories and help us isolate relevant properties of objects and experiences.

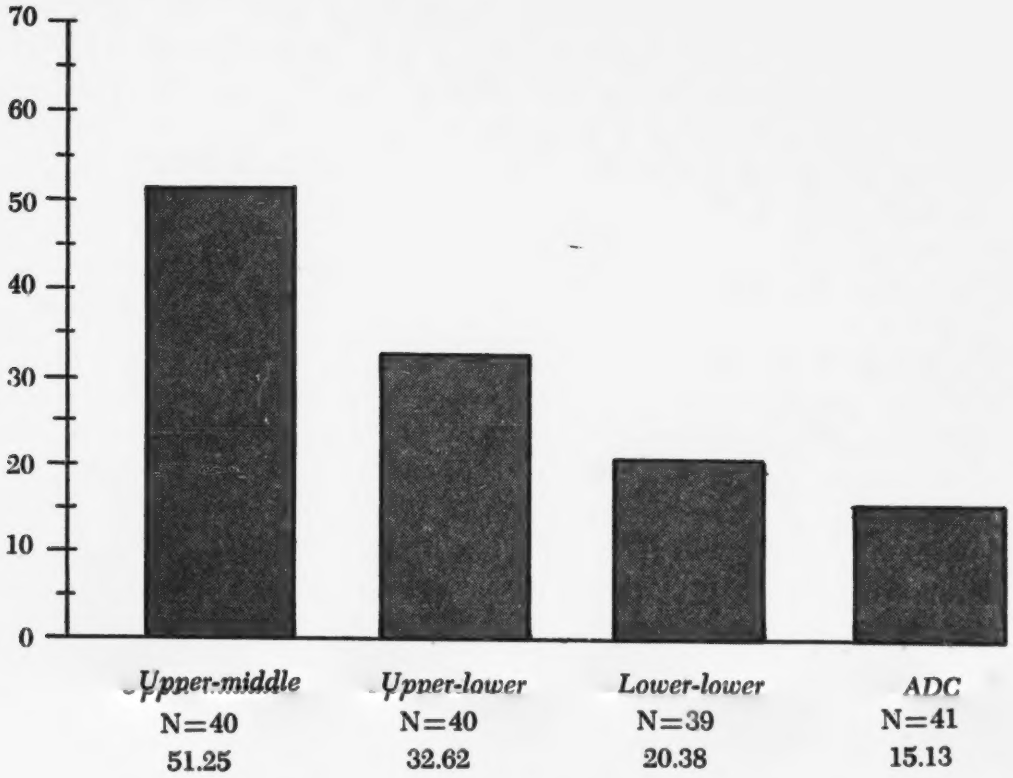

Figure 1. Comparison of Percent of Scorable Responses by Four-Year-Olds on the Sigel Sorting Task [3]

Category	Social Class			
	Upper-middle N=40	*Upper-lower* N=40	*Lower-lower* N=39	*ADC* N=41
Total Descriptive	5.05	2.95	1.72	1.32
Descriptive Part-Whole	2.25	.65	.20	.34
Descriptive Global	2.80	2.30	1.51	.98
Relational-Contextual	3.18	2.22	1.18	1.02
Categorical-Inferential	2.02	1.35	1.18	.61

Table 1. Mean Scores for Cognitive Style Dimensions According to Social Class Level

[3] Virginia C. Shipman and Robert D. Hess. "Children's Conceptual Styles as a Function of Social Status and Maternal Conceptual Styles." A paper presented at the American Psychological Association meetings, September 5, 1965.

	Upper-middle	*Upper-lower*	*Lower-lower*	*ADC*
	N=40	N=40	N=39	N=41
Nonscorable Verbal Responses	5.75	6.10	6.64	7.24
Nonverbal	3.00	6.72	7.08	8.76
Non-sorts	1.00	.65	2.21	1.05

Table 2. Mean Scores for Nonscorable Responses
According to Social Class Level

	Upper-middle	*Upper-lower*	*Lower-lower*	*ADC*
	N=40	N=40	N=39	N=41
Descriptive Part-Whole	11.25	3.25	1.03	1.71
Descriptive Global	14.00	11.50	7.56	4.88
Relational-Contextual	15.88	11.12	5.90	5.12
Categorical-Inferential	10.12	6.75	5.90	3.05
Nonscorable Verbal	28.75	30.50	33.21	36.22
Nonverbal	15.00	33.62	35.38	43.78
Non-sorts	5.00	3.25	11.03	5.24

Table 3. Percentage Use of Categories by
Four-year-old Children from Different Social Class Levels

	Upper-middle	*Upper-lower*	*Lower-lower*	*ADC*
	N=40	N=40	N=39	N=41
Descriptive Part-Whole	40.0	25.0	18.0	14.6
Descriptive Global	70.0	55.0	53.8	31.7
Total Descriptive	80.0	65.0	59.0	39.0
Relational-Contextual	77.5	65.0	41.0	43.9
Categorical-Inferential	52.5	42.5	30.8	24.4
Nonscorable Verbal	85.0	87.5	92.3	85.4
Nonverbal	52.5	70.0	82.0	87.8
Non-sorts	12.5	7.5	25.6	19.5

Table 4. Percentage of Four-year-old Children
Responding in Each of the Categories

Table 4 presents the percent of children responding at least once in each of the categories. Although most upper-middle class children and a majority of the upper-lower class children use relational and descriptive-global responses, there is no extensive use of any of the cognitive style dimensions by the two lower-lower class groups. In looking at particular categories, one may note the relative absence of descriptive part-whole responses for other than the middle-class group and the large rise in nonverbal responses below the middle-class level.

Obviously, not all children used every label, although some consistent preferences are apparent. Order of preference for the cognitive style dimensions was relational and descriptive-global, alternating for first and second places in each of the groups, followed by categorical-inferential and descriptive part-whole. Relational and descriptive-global responses have been considered the most immature and would be hypothesized to occur most frequently in preschool children. The child's classifying behavior has been described as moving from idiosyncratic and irrelevant cues to a concrete mode and then to the abstract. Relational responses are often subjective and, since found to correlate with impulsivity, have been considered more primitive. Descriptive-global responses, often referring to sex and occupational roles (men, nurses), are somewhat more dependent upon experiences. On the other hand, descriptive part-whole responses have been shown to increase with age and would be expected to be used less frequently.

It may be recalled that this category, which has been correlated with favorable prognostic signs for educability such as attentiveness, control, learning ability, and recently with prediction of first-grade reading ability (Kagan, 1965), was used only by the upper-middle class children. Kagan (1964) has described two fundamental cognitive dispositions involved in producing such analytic concepts: the tendency to reflect over alternative solutions that are simultaneously available and the tendency to analyze a visual stimulus into component parts. Both behaviors require a delayed discrimination response. One may describe the impairment noted for culturally disadvantaged children as arising from differences in opportunities for developing these reflective attitudes.

Sex Differences in Cognitive Styles

Kagan, Moss, and Sigel (1963) and Sigel (1963, 1965) have reported sex differences in cognitive styles; thus, Table 5 presents the mean scores from our study for boys and girls within each social class group. For the cognitive style dimensions, comparisons by sex seem to indicate no discernible pattern within categories or social status level, and the small mean scores would make any hypotheses suspect. It may be noted, however, that in contrast to the findings reported for white middle-class four- and five-year-olds in which boys gave predominantly more descriptive part-whole responses, in our sample, middle-class girls used this category more. In recent conversations, Sigel has indicated that in his present studies with Negro children he is obtaining this same sex difference, with girls giving more descriptive part-whole responses. Since Kagan in various papers (1963, 1964) and Sigel *et al.* (1963) have reported on the positive relationship between descriptive part-whole responses and reflective, independent, emotionally controlled, masculine behavior in boys, our findings may reflect racial differences in sex-role expectations.

	Upper-middle		*Upper-lower*		*Lower-lower*		*ADC*	
	Boys N=20	Girls N=20	Boys N=20	Girls N=20	Boys N=20	Girls N=19	Boys N=20	Girls N=21
Descriptive Part-Whole	1.30	3.20	.90	.40	.35	.05	.16	.52
Descriptive Global	2.30	3.30	2.50	2.10	1.10	1.95	1.20	.76
Descriptive Total	3.60	6.50	3.40	2.50	1.45	2.00	1.35	1.29
Relational-Contextual	3.10	3.25	2.10	2.35	1.80	.53	.95	1.10
Categorical-Inferential	2.40	1.65	1.15	1.55	1.40	.95	.25	.95
Nonscorable Verbal	4.55	6.95	5.25	6.95	5.80	7.53	6.40	8.05
Nonverbal	4.65	1.35	6.80	6.65	7.90	6.21	9.75	7.81
Non-sorts	1.70	.30	1.30	0.00	1.65	2.79	1.30	.81

Table 5. Mean Scores by Sex

In looking at the remaining categories, however, a consistent sex-related trend appears. Girls gave more nonscorable verbal responses, while boys gave more nonverbal ones. Girls were more likely to have tried to use words, though in certain instances not differentiated enough for classification (e.g., "because it has this and this," "because it looks like it," with no further response following additional probes), while boys said, "I don't know" or resorted to pointing or moving the pictures together.

It can be hypothesized that boys, especially in lower-class homes, receive more negative reinforcement for verbal behavior, and that girls are encouraged to talk more and are talked to more. As a consequence, when unsure of himself, the boy is less likely to experiment with words. Recent analyses of our data have revealed that mothers of girls tend to use more elaborated linguistic styles and are more likely to give their children rationales for behaving. Consequently, boys, receiving more restricted codes, would have been hypothesized to be more impaired in their level of categorization.

In the teaching situations, we obtained additional measures of the child's ability to correctly sort objects and to verbalize the principle on which the sorting or grouping was made. Children from middle-class homes were well above children from working-class homes in performance on these sorting tasks, particularly in offering verbal explanations as to the basis for making the sort. Over 60 percent of middle-class children placed the objects correctly on all tasks; the performance of working-class children ranged as low as 29 percent correct. Approximately 40 percent of the middle-class children who were successful were able to verbalize the sorting principle; working-class children were less able to explain the sorting principle, ranging downward from the middle-class level to one task on which no child was able to verbalize correctly the basis of this sorting behavior. These differences clearly paralleled the relative abilities and teaching skills of the mothers from differing social status groups.

Measures of Mothers' Performance

Let us now look at the mothers' performance on the Sorting Task. Analysis of their preferred manner of grouping stimuli and the levels of abstraction they used in perceiving and ordering objects in their environment reveals that relational responses were most frequently offered, categorical-inferential were the next most common, and descriptive, most infrequent (see Table 6). The distribution of responses of our status groups showed that the middle-class group was higher on descriptive and categorical categories; low status groups were higher on relational ones.

Category	Social Class			
	Upper-middle	*Upper-lower*	*Lower-lower*	*ADC*
	N=40	N=42	N=39	N=41
Total Descriptive	3.18	2.19	2.18	2.59
Descriptive Part-Whole	1.65	1.33	1.31	1.49
Descriptive Global	1.52	.86	.87	1.10
Relational	5.52	6.79	7.38	6.73
Categorical	3.30	3.00	2.23	2.66

Table 6. Responses to Adult Sigel Sorting Task (Maps) (Means)

The greater use of relational categories by working-class mothers is especially significant. Response times for relational sorts are usually shorter, indicating less reflection and evaluating of alternative hypotheses. Such responses also indicate relatively low attention to stimulus details (Kagan, 1964). Many of these relational responses are very subjective, reflecting a tendency to relate objects to personal concerns by contrast to the descriptive and categorical responses which tend to be objective and detached, more general and more abstract. Categorical responses, in particular, usually represent thought processes which are more orderly and complex in organizing stimuli, suggesting more efficient strategies of information processing.

These interpretations become more striking when one looks at the relationships between categorizing behaviors. Among the scoring dimensions for the mother, descriptive-global and categorical responses, both of which entail categorizing and labeling, were significantly positively correlated (Pearson r = .25). But descriptive-analytic and descriptive-global responses were both negatively related to the use of relational categories (Pearson r = —.59 and —.67). WAIS verbal IQs varied significantly in the same manner. (For the children there were no significant correlations between scoring dimensions, except, of course, between descriptive-total and its parts.) Therefore, as social status decreased, we saw decreased use of an abstract attitude toward a task; and from this we would predict resulting detrimental effects on the child's ability to develop more abstract modes of thinking.

The small number of scorable responses for the children make statistical comparisons difficult but certain trends were clearly evidenced. The mother's use of a predominant mode of relational categorizing was significantly related to the child's use of nonscorable and nonverbal responses on the Sigel. Moreover, it was related to poor performance on the 8-Block and Etch-a-Sketch tasks. The mother's inability or disinclination to take an abstract attitude on the sorting task was correlated with ineffectual teaching on the 8-Block task and inability to plan and control the Etch-a-Sketch situation. Since relational responses have been found (Kagan, Moss, and Sigel, 1963) to be correlated with impulsivity, tendencies for nonverbal rather than verbal teaching, mother domination in the interaction setting, and limited sequencing and discrimination might be expected and would be predicted to result in limited categorizing ability and impaired verbal skills in the child. Significantly, there was a trend for maternal relational responses to be associated with inability or refusal of the child to make a sort. It might be noted here that maternal relational responses are negatively related to the child's use of relational responses at this age level, when for the child it indicates success in providing a rationale, though a simple one.

Cognitive Interaction: Further Measures

We have just begun to analyze some of our other measures of cognitive interaction, and these offer additional evidence of the relationship between maternal communication modes and the child's categorizing ability. Nine language scales were developed to measure various dimensions of lexical, syntactic, and cognitive complexity and elaboration in the mothers' speech. Samples of the mothers' speech were obtained from their responses to a task in which they were shown the "lion-mouse" card of the Children's Apperception Test and asked to tell their child a story related to the card. This card is a picture of a lion sitting on a chair, holding a pipe in his hand. Beside him is a cane. In the corner is a mouse peering out of a hole. The lion appears deep in thought.

A comparison of the means for each scale for the four social class groups reveals that there is a clear social class trend, with the middle-class mothers consistently scoring highest on all scales, the upper-lower mothers generally coming next, and the two lower-lower groups usually scoring lowest (see Table 7). The major cut occurs between the middle-class mothers and the other three groups. The middle-class mothers exhibit a highly elaborate language style which the others do not. Middle-

	Social Status			
Scale	*Middle* N=40	*Upper-lower* N=42	*Lower-lower* N=40	*ADC* N=41
Mean Sentence Length [4]	11.39	8.74	9.66	8.23
Adjective Range [5]	31.99	28.32	28.37	30.49
Adverb Range [6]	11.14	9.40	8.70	8.20
Verb Elaboration [7]	.59	.52	.47	.44
Complex Verb Preference [8]	63.25	59.12	56.85	51.73
Syntactic Structure Elaboration [9]	8.89	6.90	8.07	6.46
Stimulus Utilization	5.82	4.81	4.87	5.36
Introduced Content	3.75	2.62	2.45	2.34
Abstraction [10]	5.60	4.89	3.71	1.75

Table 7. Social Status Differences in Language Usage
(Scores are the means for each group.)

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[4] Average number of words per sentence.

[5] Proportion of uncommon adjective types to total nouns, expressed as a percentage.

[6] Proportion of uncommon adverb types to total verbs, adjectives, and adverbs, expressed as a percentage.

[7] Average number of complex verb types per sentence.

[8] Proportion of complex verb types to all verb types, simple and complex.

[9] Average number of weighted complex syntactic structures per 100 words.

[10] Proportion of abstract nouns and verbs (excluding repetitions) to total nouns and verbs (excluding repetitions), expressed as a percentage.

class mothers talk in longer sentences, manifest a larger repertoire of complex verb forms, exhibit a wider range of adverbs, use many more complex syntactic structures, exhibit greater perceptual discrimination—as shown by their attending to more of the stimuli in the test picture, show more imaginative thought elaboration by going beyond the information immediately given in the test picture and introducing characters and objects not manifest in the picture, and display more abstract concepts.

In a regression analysis using the nine language scales, social class, mother's WAIS Verbal IQ and child's Binet IQ, social class level was significantly correlated only with descriptive part-whole responses. Although marked differences by social class are reported when other variables are controlled for, this factor appears to be of only limited relevance as a predictor. The most striking relationship occurred between the mother's language abstraction and the child's categorical-inferential responses. It is of interest to note that it is not the mother's abstraction ability (as measured by WAIS Verbal IQ and especially the similarities subtest), but her abstract language behavior that is related to the child's cognitive abstraction.

In the teaching situations, the mothers from the four status groups differed relatively little on the average in the affective elements of their interaction with their children. The gross differences appeared in the verbal and cognitive environments which they presented—in the amount and specificity of task-relevant information, whether attempts were made to elicit feedback from the student to discover how much he understands, and the manner of reply to the child's feedback.

The most important variable for predicting the child's success in correctly placing and/or explaining the principle for sorting the blocks or toys in response to the examiner's request was whether the child was given many opportunities during the teaching session to talk about the task. The larger the proportion of physical commands and questions by the mother ("Put this block with the tall ones."), the poorer the child's performance. A passive learning style is negatively related to high success in the teaching situation.

Similarly, we have factor-analyzed the mothers' teaching behaviors during the 8-Block situation. We have found that the child's use of descriptive part-whole or analytic responses is negatively associated with Factor 1, which we describe as a "tug of war" factor (a nonattend-descriptive part-whole or analytic responses is negatively associated with Factor 3, which is indicative of good verbal interaction (the mother asking the child for verbal responses and giving verbal feedback, and the child giving verbal replies and spontaneously verbalizing).

Status and Person Orientations

In applying Bernstein's concept of status-oriented and person-oriented families to our data, we analyzed maternal responses to the question: "Imagine your child is old enough to go to public school for the first time. How would you prepare him? What would you tell him?"

One mother, who was person-oriented and used elaborated verbal codes, replied as follows:

> First of all, I would remind her that she was going to school to learn, that her teacher would take my place, and that she would be expected to follow instructions. Also that her time was to be spent mostly in the classroom with other children, and that any questions or any problems that she might have she could consult with her teacher for assistance.
>
> Anything else?
>
> No, anything else would probably be confusing for her at her particular age.

In terms of promoting educability, what did this mother do in her response? First, she was informative; she presented the school situation as comparable to one already familiar to the child; second, she offered reassurance and support to help the child deal with anxiety; third, she described the school situation as one which involves a personal relationship between the child and the teacher; and fourth, she presented the classroom situation as one in which the child was to learn.

A second mother responded as follows to this question:

> Well, John, it's time to go to school now. You must know how to behave. The first day at school you should be a good boy and should do just what the teacher tells you to do.

In contrast to the first mother, what did this mother do? First, she defined the role of the child as passive and compliant; second, the central issues she presented were those dealing with authority and the institution, rather than with learning; third, the relationship and roles she portrayed were sketched in terms of status and role expectations rather than in personal terms; and fourth, her message was general, restricted and vague, lacking information about how to deal with the problems of school except by passive compliance.

These responses illustrate the tendency for status-oriented families and relationships to restrict the linguistic codes used in communication. The child who comes to school with a status orientation is prepared to engage in rote learning and passive acceptance of school authority in the learning situation. His initiative and participation in the learning possibilities of the school are meager. Not that all such children accept the authority of the school in this unquestioning fashion. They have few alternatives, however, except to resist or rebel. The range of choice open to them is limited by the nature of the cognitive and interactional environment in which they have had experience.

A more detailed analysis of the mothers' responses to this question grouped their statements as *imperative* or *instructive*. An imperative statement is defined as an unqualified injunction or command, such as "Mind the teacher and do what she tells you to do. . . ." or "The first thing you have to do is be on time" or "Be nice and do not fight." An instructive statement offers information or commands which carry a rationale or justification for the rule to be observed. Examples: "If you are tardy or if you stay away from school your marks will go down" or "I would tell him about the importance of minding the teacher. The teacher needs his full cooperation. She will have so many children that she won't be able to pamper any youngster."

In the imperative instances, the child is asked for a simple mental response. He is asked to attend to an uncomplicated message and to make a conditioned response (to imply), he is not called upon to reflect or to make mental discrimination. In the other example, the child is required to follow two or three ideas. He is asked to relate his behavior to a time dimension; he must think of his behavior in relation to its effect upon another person.

He must perform a more complicated task to follow the communication of his mother in that his relationship to her is mediated in part through concepts and shared ideas; his mind is stimulated or exercised (in an elementary fashion) by a more elaborate and complex verbal communication initiated by the mother. As objects of these two divergent communication styles, repeated in various ways, in similar situations and circumstances during the preschool years, these children would be expected to develop significantly different verbal facility and cognitive equipment by the time they enter the school.

In relating our mothers' responses to open-ended questions in the interview concerning hypothetical school situations, we find consistent negative relationships between percent of status-oriented and imperative message units (where the mother gives the child no rationale for her proscribed behaviors, but just commands) and the child's ability to categorize. Using each of the children's Sigel scores mentioned as dependent variables in a regression model, using the teaching factors, language styles, and factor scores from an Educational Attitude Survey, and omitting IQ and social class as independent variables, we obtain multiple correlations between .45 and .59.

Summary of the Study Thus Far

As our data analysis progresses, we hope to become more able to say what cultural disadvantage means. We expect to continue seeing these families for at least the first few years of school to assess the predictive value of certain maternal behaviors, as well as to document the growth and development of certain cognitive behaviors. Longitudinal data on the Sigel Sorting Task will provide information on developmental use of these categories, consistency of preferred mode, and possible differentiation of responses by sex as sex roles become more differentiated. The occurrence of more scorable responses will allow us to assess better the similarities and differences between mother and child's cognitive style. Also, with somewhat older children, more testing measures become feasible. We are now obtaining more measures on the mother and child concerning the reflection-impulsivity dimension.

Our study would seem to indicate that the structure of the social system and the structure of the family shape communication and language and that language shapes thought and cognitive styles of problem solving. It appears fruitful to consider social class differences in terms of differences in availability of options in the mother's daily life. The lower-class mother's narrow range of alternatives is being conveyed to the child through language styles which convey her attitude of few options and little individual power and this is now being reflected in the child's cognitive development.

A problem-solving approach requires reflection and the ability to weigh decisions, to choose among alternatives. The effect of restricted speech and a status orientation is to foreclose the need for reflective weighing of alternatives and consequences; the use of an elaborated code with its orientation to persons and to consequences tends to produce a cognitive style more easily adapted to problem solving and reflection.

The cognitive environment of the culturally disadvantaged child is one in which behavior is controlled by status roles rather than attention to the individual characteristics of a specific situation and one in which behavior is neither mediated by verbal cues which offer opportunities for using language as a tool for labeling and ordering stimuli in the environment nor mediated by teaching that relates events to one another and the present to the future. This environment produces a child who relates to authority rather than to rationale, who although often compliant is not reflective in his behavior, and for whom the consequences of an act are largely considered in terms of immediate punishment or reward rather than future effects and long-range goals.

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Children and Language Acquisition[1]

VERA P. JOHN

THE exciting human process of learning to speak is fast becoming a field of serious study and earnest theoretical debate. A new and impressive label has been attached to this field: it is now referred to as the study of developmental psycholinguistics. In the dozens of new studies of children's language, three major areas are stressed: (a) the rate of language acquisition, (b) the study of children's grammar, and (c) the study of the functions of language.

Review of Investigations

The investigations of the rate of language acquisition are the oldest of the three domains of study. The timetables based on the rate investigations have charted growth in children's ability to comprehend the speech of their elders, the uneven ways in which the children's vocabulary becomes expanded, and the increase in the mean length of verbal utterances with age.

While describing the sequence and rate at which the young child's verbal production comes to resemble the speech of his elders, investigators have differed in their interpretations of disparities in learning rates among groups of children. Some have ascribed these differences to heredity; others, like McCarthy,[2] to differences in the amount and quality of affectional bonds between children and their mothers; and more recently, Hunt and Hebb, as well as Deutsch, have stressed the availability

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[1] Preparation of this report was partially supported by National Science Foundation Grant GS-90.

[2] References are found at the end of the paper.

of cognitive stimulation in the child's environment as a significant cause of these group differences. Some of my own research findings to be reported here highlight the roles of birth-order and social class as significant antecedent conditions in the rate of language acquisition.

Currently the study of the acquisition of syntax is one of the liveliest areas of language research. The studies of Brown, Slobin, Ervin, Braine, and Menyuk have focused on the grammar of very young children.

The impact of Noam Chomsky on psycholinguistics has accounted in part for the initiation of many of the studies of the acquisition of syntax. The premise of an inherited grammatical competence, which becomes slowly manifested in the verbal performance of the growing child, is theoretically derived from Chomsky's writings. Although it has long been recognized that one of the excellent indices of language growth is the length of children's utterances, few of the older studies in this field have also examined the qualitative changes in word combinations.

However, what is syntax? And how do we conceive of its development and acquisition?

McNeill has defined syntax as a combinatorial skill; that is, ". . . knowing English means, among other things, that we can form combinations of sentence patterns" (p. 3). McNeill has argued that young children learn to combine words in relatively uniform ways because they have a strong grasp of the basic underlying structure of language. Though they do exhibit a number of errors in syntax during their early years, these errors are related to the superficial structure of the language.

The third variable which some investigators have stressed in the study of language acquisition is that of the functions of language in the adaptive behavior of the young child. Many workers mention the fact that language serves expressive, directive, cognitive, and other functions, but often the mention is perfunctory. Indeed, the functional features of language have been generally neglected by both theorists and researchers in language behavior, with some notable exceptions. The socially and culturally specific uses of language are discussed with persuasion by the sociolinguists. The most comprehensive approach to language function has been presented by Hymes in his ethnography of speaking. In addition, the researchers working with socially disadvantaged children have voiced similar concerns. Bernstein's oft-quoted distinctions between restricted and elaborated codes are presented by him in the context of a functional theory of language use. In a similar vein, the present author (John, 1965b) has stated "that the crucial difference (between the language of middle-class and lower-class children) . . . is not in the quality of language, but in its use."

Language Acquisition: An Extension of Theory

In this paper I wish to develop further the implications of a theoretical position which stresses language functions related to the manifold problems of language acquisition.

The most rudimentary forms of language (phonemic, morphemic, and syntactical forms) seem to appear in highly similar fashions in the repertoires of young children. As both Lenneberg and Chomsky have argued, this uniformity might be the result of "an innately mapped-in program for behavior" (Chomsky, p. 53). However, enormous variations in the range and adequacy of language forms appear in children's verbal repertoires soon after the rudimentary forms have been mastered. The sharp divergences which have been noted (whether by Irwin, at the age of 18 months, in phonemic production between middle-class and lower-class children, or by McCarthy, between only-children and twins) can be traced to certain antecedent environmental conditions.

If children hear and use language in highly restricted learning conditions caused by poverty, or by overly mechanized educational practices, then their subsequent language skills will reveal a slow rate of acquisition as well as a limitation in the diversity of language uses; that is, the poverty in functional diversity may be expressed by a limited ability to verbally convey or control emotions, to plan play or activities by means of words, or even in the child's ability to engage in effective interpersonal communication. Throughout this paper a dichotomy will be made between quasi-automatic or overlearned language, on the one hand, and newly elaborated or inventive language, on the other, with a stress upon ways in which we can facilitate the development of this latter capacity in growing children.

The Rate of Language Acquisition

Laymen and behavioral scientists alike frequently judge the intellectual growth of young children by the quality of their verbal expression. Although these judgments are easy to make informally, precise measurement of the quantity and quality of language growth in children is difficult to determine.

There are a few traditionally established measures of the assessment of verbal skills, such as performance on vocabulary measures and the mean sentence length in children's utterances (McCarthy, 1954). These measures, however, are not broadly enough based to chart the early language growth of the preschool child.

Vocalization. Even young deaf children emit vocalizations, and these cooing and babbling sounds of infants can be experimentally manipulated. Social conditioning of vocalizations have been shown in infants as young as three months (Rheingold, Gewirtz, and Ross). The phonetic output of infants has been compared by a number of investigators, who have found significant differences between orphanage-raised infants and those living in their homes. In her exciting study of single mothering of children living in an orphanage, Rheingold found a reliable increase in vocalization among the experimental subjects. Though early vocalization might well be an innately structured behavior, variations in the rate of vocalization appear under environmental control.

One wonders about similar differences among somewhat older infants. However, research findings concerning the output of the 10- or 11-month-old are scarce. A phonetic shift is believed to occur in which children drop sounds that are not part of their "mother tongue" while producing, with increasing precision, those of their own language. Irwin, in a study of speech stimulation, instructed working-class mothers to read daily to their children, who ranged in age from 13 to 30 months. A control group of children of the same age and social class membership did not receive this kind of systematic verbal stimulation. Irwin found that the phonemic output of the experimental group surpassed that of the control group by the time the subjects reached 18 months of age.

These findings are of great interest in light of the basic argument set forth earlier in this paper. Vocalization does seem to be emitted by all infants, even those handicapped by lack of hearing. However, once a basal level of sound production is reached, infants vary widely in their range of vocalization. These variations can often be traced to environmental conditions, either experimentally or socially produced.

Comprehension of speech. An often uttered generalization about language acquisition is that comprehension precedes production. However, there is a lack of techniques to assess comprehension in very young children. The infant's response to the word "no" and his enactment of "bye-bye" are a nearly universal occurrence around his first birthday. This decoding of the adult's speech continues at accelerated rates between the ages of one and two. But the behavioral indices of comprehension employed in older children, such as the accurate enactment of a command ("Put the cup on the table") are hard to execute with very young children.

Among older preschool children, one of the standard measures of comprehension is the picture-vocabulary test. In the Peabody Picture Vocabulary Test, for example, the child is asked to choose out of four pictures the one which corresponds to the label uttered by the experimenter. Because there is no overt language required from the subject (only a pointing response), such a test task is useful in estimating the young child's comprehension of picture-word relations.

The acquisition of productive language. Space does not permit a careful, sequential description of the process of learning to speak. There are a number of excellent summary articles available describing this development (McCarthy, 1954; Ervin and Miller, 1963). However, in this paper, emphasis will be placed upon interpreting the variations in the rate of language acquisition, together with the description of some recent research findings.

Language, a socially developed tool of communication and cognition, is also a socially acquired skill. The human infant, if he is to acquire language, needs the presence of a model; namely, another speaker. As described above, the availability of adults surrounding the infant, even in the first months of life, seems to affect the range of vocalization that infants emit.

Importance of Adult-Child Relationship

It is the assumption underlying much of this writer's work that the frequency, manner, and inclusiveness of the adult-child relationship during the preschool years of the child's life form the basis for the quality of the child's verbal behavior by the time he enters first grade. To gather detailed evidence to substantiate this premise is extremely difficult. Ideally, careful longitudinal studies in the homes of young children are needed to furnish us with the necessary information to document this position. In lieu of this methodologically difficult research stratagem, investigators have chosen a different approach. We have looked at some gross indices of parental availability to children during the early years of life, such as the social class membership of the family, on the assumption that families living in poverty cannot devote themselves as actively to interpersonal communication with their children as can those not similarly disadvantaged.

Another index is the birth-order of the child. First-born and only-children have been found to show greater proficiencies in verbal skills than children of other birth-orders. Koch interpreted her birth-order findings as follows:

> . . . If a child has his parents' undivided attention for more than two years before the sib arrives and at the time when he is making most rapid progress in acquiring speech . . . he will be relatively more influenced by their verbal and intellectual stimulation than one would be whose sib follows close on his heels (p. 219).

McCarthy, who pioneered many of the studies of language acquisition, postulated a gradient of verbal proficiency as a function of the amount and kind of contact which the child experiences with his mother.

Two recently completed doctoral dissertations elucidate some of the processes involved in mother-child interaction and language proficiency. Stodolsky examined maternal behavior and language and conceptual skills of Negro preschool children, as part of the larger Hess and Shipman research project. She found that, among a number of measures, two clusters of maternal behaviors correlated highly with language performance in children: (a) the quality of the mother's language, and (b) her teaching style (or more specifically the giving of affirmative feedback to her child while he is solving a problem). The richness of verbal stimulation also emerged as a significant variable in Cazden's study (1965) of language in young Negro children. She found that in the interaction of tutors and young children, the modeling of well-formed sentences contributed to language growth in the child.

Further evidence of the pertinence of parental availability can be culled from the literature of social class differences and verbal skills. When comparing Negro six-year-olds from three different social class groups, Milner found that middle-class children whose parents spend much time in verbal interaction with them have, in their verbal performance, a distinct advantage over lower-class children. The number of studies which have shown significant relationships between social class and language development (phonology, vocabulary, and sentence structure) is considerable—Templin, Schulman and Havighurst, Deutsch and Brown, and John (1965a). As Cazden expresses it, the findings can be quickly summarized: on all the measures, in all the studies, the upper socioeconomic status children, however defined, are more advanced than the lower socioeconomic status children. However, in some studies, certain nonverbal measures fail to reveal social class differences.

Role of Social Class and Birth-order in Language Socialization[3]

The author has recently completed a study which attempted to examine, within the scope of a single investigation, the effects of birth-order, social class status, and comparisons between verbal and nonverbal tests.

The subjects of this study were 90 Negro children attending the first grade in New York City schools. They were selected to represent three social-class groupings (lower-lower, upper-lower, and middle-class), and were balanced for sex and birth-order. The testing program was carried out in four different schools; all subjects were drawn from the two top academic groupings in their class. This particular selection device served the purpose of choosing a relatively homogeneous group of children in terms of academic standing, while assuring that they represented divergent social-class and birth-order positions.

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[3] This investigation was supported by Grant GS-90 from the National Science Foundation.

One of the first questions asked, in this study, was whether first-grade children of various social-class backgrounds differed in verbal as well as nonverbal subtests of a factorial intelligence test. In comparing their performance on the scales of the SRA Primary Mental Abilities Test, no social class or birth-order differences emerged on the perceptual subtests, but significant social-class differences were obtained on the verbal subtests.

These findings are in line with some earlier research, pinpointing the specific dependence of verbal skills upon social conditions. But it is important to remember that all the subjects in this study came from the top groupings of their class, and thus the numerous poor-achieving children who suffer from perceptual dysfunction might not have been included. Additional tasks of language proficiency revealed the same social class differences. But in addition to social class differences, we have also found birth-order differences on verbal performance.

Second-born children scored lower than first-born children on the Peabody Picture Vocabulary Test. This difference in birth-order was largest among middle-class children. And this finding bears out the original prediction; namely, that first-born children will excel second-borns in language tasks. This difference is expected to be smaller between lower-class than middle-class children. This prediction concerning birth-order differences in language mastery was related to the more general assumption on the role of parental availability in the development of speech. Parents living in poverty are likely to have limited resources for sustained verbal interaction with their children, and thus respond quite uniformly to all their children.

We have characterized the behavior of the middle-class mother somewhat differently. She, too, is thought of as rather uniform in the ways in which she speaks *to* her children; the richness or clarity of her speech varies little when addressing her first-born or third-born. But her availability as a close listener to her child's speech, her patience as an interpreter, and her enthusiastic reinforcement of every new verbal effort are likely to be less limited, unless she has to share her attention among several children. Parental availability might also be significant in the development of different processes of language production.

Overlearned and Elaborated Speech

Earlier in this presentation, the distinction was made between overlearned or quasi-automatic speech and newly elaborated or inventive speech.[4] Examples of overlearned speech are the oft-repeated exchanges in elevators and the recitation of the pledge of allegiance. Newly elaborated language requires an active cognitive process preceding or accompanying speech production. During the acquisition of language, certain recurrent conditions, such as frequent exposure and repetition, are likely to contribute to overlearned speech. But conditions providing for active and sustained dialogue are necessary for the acquisition of inventive language. In an earlier paper (John, 1965a), the author has hypothesized that all children have opportunities to acquire communicative skills, but there are likely to be differences among children of different social milieux in the acquisition of newly elaborated language.[5]

A specialized test of labeling behavior was developed by the author a few years ago, aimed at testing two different processes in overt naming, using the same set of stimuli. In this Verbal Identification Test, children were first asked to enumerate what they saw on stimulus cards depicting simple events or a group of objects; then, the pictures were shown again and they were asked to give the most appropriate "title" for each picture; that is, to integrate the various parts of the picture. The hypothesis that lower-class and middle-class Negro children will differ little, if at all, in their enumeration, but that class differences would emerge in the second half of the task, or in integrating responses, was tested in a previous research (John, 1963). These findings were replicated in the present investigation.[6]

Within the theoretical structure here proposed, it might seem reasonable that the enumeration responses elicited in the Verbal Identification Test can be thought of as reflecting overlearned verbal responses. We purposefully chose pictures of rather common objects and events. By contrast, the Gestalt or integrating responses of the second half of this test can be likened to newly elaborated or inventive language, in that the requirement to express in a single word or phrase a picture which has been previously described in detail, is a difficult, cognitively demanding, and infrequently occurring task in the life of young children. The Verbal Identification Test does not yield a direct measure of the two processes of language, overlearned and newly elaborated, but the test does afford an empirical approximation as reflected in the two parts of the task.

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[4] Others have proposed similar distinctions, among them Hughlin Jackson, Frieda Goldman-Eisler, and Basil Bernstein.

[5] Space does not permit a detailed discussion of the relationship of social class to language. The interested reader is referred to the Proceedings of the Fiftieth Anniversary Conference of the Bank Street College of Education, *Perspectives on Learning*, specifically to Basil Bernstein's presentation and the ensuing discussion (volume to be issued by the College, 1967).

[6] In 1963, we found in a more heterogeneous population that differences in Gestalt responses emerged among fifth-grade children; in this study, the same differences were found in a younger and more homogeneous first-grade population.

In summary, it has been argued that the birth-order and social-class differences obtained in this and other studies can be conceptualized as related to environmentally determined conditions, in particular, to parental availability for verbal dialogue. The development of newly elaborated speech is most likely to be facilitated by the enriched and attentive world of the middle-class, first-born child.

Use of Story-retelling Technique

The findings described above were obtained with tests which required as responses pointing, single words, or short phrases. Though of significance in the referential behavior of young children, these responses can be criticized as yielding unrepresentative samples of language, by the stress upon isolated units as responses. In order to obtain more life-like or representative language from young children, the author developed a technique called "story-retelling." This task utilizes a common class of stimulus inputs, picture stories.

In the story-retelling session, a teacher or research assistant works individually with the young child. The adult reader first tells the child that when the story is over, he will be asked to retell it. The story is then read aloud while the child follows, watching the pictures in the book. Then the child retells the story, cued by the sequence of illustrations from the story. A tape-recording of the child's account is later transcribed and analyzed. This part of the research consisted of 60 first-grade subjects, grouped according to social class membership and birth-order position.

Again the question was asked whether there are differences in the quantity and quality of the retold stories as a function of the child's social class membership and birth-order. The findings of greatest relevance to this position emerged from the following analysis. Two classes of verbalizations were identified: first, stimulus-derived statements (items from or closely related to the story, which were also clearly depicted in the illustrations), and second, stimulus-inferred statements (items which were not depicted in the story, but which were nevertheless necessary to hold the story together). The analyses of the retold stories revealed significant differences for social class in both of these analyses;

namely, middle-class children excelled in their production of story-related phrases. Interestingly, there were no such differences in the total number of phrases produced by the children; that is, lower-class and middle-class children were, on the whole, equally verbose, but the former were less accurate in their retellings. The stimulus-inferred analysis yielded, in addition to social-class differences, a superiority of the first-born subjects. This difference is largest among the middle-class children, again substantiating the original predictions.

Summary Statement

In the beginning of this paper, the position was put forth that if children hear and use language in restricted conditions of learning caused by poverty, then their subsequent language skills will reveal a relatively slower rate of acquisition and be characterized by limitations in functional diversity. An attempt has been made to present a variety of research findings which lend support to this statement. However, limitations of psychological theory and methods, particularly as pertaining to language functions, make a comprehensive effort in evaluating language acquisition as yet premature.

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PART II

New Approaches to Organization and Staffing

New Organizational Patterns for the Middle School Years

William M. Alexander

IT IS difficult if not well-nigh impossible to find an organizational pattern in education that is really "new." For example, an "ungraded" school of a kind existed in our nation long before the graded school we would now replace with various types of deviations between gradedness and ungradedness. In fact, a publication of 90 years ago (1877) gave definitions of graded and ungraded schools which are sharper, and even more descriptive of current nongraded efforts, than some present definitions:

> Graded schools are usually defined as schools in which the pupils are classified according to their progress in scholarship as compared with a course of study divided into grades, pupils of the same or a similar degree of proficiency being placed in the same class. An ungraded school, on the other hand, is one in which the pupils are taught individually, each one being advanced as far, and as fast, as circumstances permit, without regard to the progress of other pupils.[1]

Once the idea of graded schools was accepted about a century ago and with it eventually the notion of a school ladder connecting elementary, secondary, and higher education, the controversy began as to what grades belonged where. An eight-grade elementary school topped by a four-year high school became the most frequent organization, but not the only one. Nor was it to remain the most popular. Before the graded system was a half-century old in the United States and just as the

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[1] Henry Kiddle and Alexander J. Schan, editors. *The Cyclopedia of Education: A Dictionary of Information for the Use of Teachers, School Officers, Parents, and Others.* New York: E. Steiger, 1877. pp. 375-77. As cited in Maurie Hillson, editor. *Change and Innovation in Elementary School Organization: Selected Readings.* New York: Holt, Rhinehart & Winston, Inc., 1965. p. 2.

8-4 plan was becoming well-established, many criticisms of this ladder arrangement were reported. Even before the turn of the century two national committees, the Committee of Ten and the Committee of Fifteen, concerned with secondary and elementary education respectively, had proposed the introduction of more advanced work in grades 7 and 8.

Further reports and debates on the 8-4 plan in the early decades of this century were accompanied by the introduction of the junior high school. First established in 1910, this new school became a sufficiently popular part of the school ladder to bring about a reversal of the organizational pattern between 1920 and 1960. In the former year, the 8-4 plan seemed firmly entrenched, with over 83 percent of the total enrollment of the public secondary schools found in the four-year high schools and only 1.9 percent in separate junior high schools. But in 1960 the four-year high school enrolled only 18 percent of the total enrollment and the reorganized schools 82 percent, including 25 percent in the separate junior high schools. Thus these 40 years marked the move to a six-grade elementary school and a 6-3-3 school ladder.

The figures tell only part of the story of the changing school ladder. For example, the junior high school has not been universally a three-year school embracing grades 7, 8, and 9. Frequently it has been a two-year school for grades 7 and 8, and sometimes it has been for three years but beginning with grade 6. Even the term "junior high school" has not been uniform, some communities calling their school in the middle an "intermediate" and more recently a "middle" school. There have also been such variants as 6-4-4 and 7-5 and 7-2-3 ladders. Furthermore, the elementary school has added both a kindergarten and a nursery school at the bottom of the school ladder.

Today once again there is increasing exploration of different arrangements of the rungs of the school ladder. Widespread groupings for ungraded organization would, in effect, give each individual his own system of rungs. And there is extensive movement of the rungs in the middle to create a somewhat different organization of the middle school years. Before examining this movement, it may be profitable to attempt certain generalizations based on the experience of the past century with the changing school ladder: (a) no particular arrangement of rungs and levels has so far become universal, and one wonders if one will or should; (b) the most numerous varieties of grade combinations and locations in relation to other levels have existed in the middle of the ladder, suggesting greatest uncertainty at this level; and (c) local considerations relative to population trends and building facilities may have had more to do with the ladder plan used than any theories of proper school organization.

The Current Middle School Movement

There is no comprehensive survey of current school organizations bridging elementary and high schools to tell us just how many school districts have already adopted some reorganized pattern or how many are considering doing so. Several bits of partial data incline one to think that the number is considerable, enough to suggest the earmarks of a "movement." In fact, over a year ago, Paul Woodring stated that the 6-3-3 plan appeared to be "on its way out" and sounded an encouraging note for the possible success of the intermediate or middle school as an institution that might "contribute greatly to the improvement of educational quality."[2] Although one doubts whether some 6,500 junior high schools in the United States will very readily or rapidly give way to new-type middle schools, it does seem likely that many of them will be reorganized in connection with their feeder elementary schools into schools that will be more than vestibules to the senior high schools, becoming truly transitional or bridging middle schools.

Such surveys of interest in the middle school as have been made do indicate a relatively small number of schools involved but a very considerable interest in exploring the new way of organizing. In 1963-64, a survey by the Educational Research Service found that, of 443 school systems reporting, only 20 followed a pattern of grade organization combining one or more of the elementary grades below grade 7 with one or more grades usually assigned to the junior high school.[3] A 1965 bulletin of the Educational Facilities Laboratories described several middle schools and suggested that the "new middle school . . . is a lively possibility for school systems whose logistics permit such a solution."[4] Its 1966 publication on *The Schoolhouse in the City* reviews the "emergence of the 'middle school' as a replacement for the junior high school" and states that it is "emerging as more than a new organization."[5]

In his survey of junior high schools in the northeastern United States, Zdanowicz[6] identified as middle schools 24 having grades 6-8 and 13, grades 5-8, noting that 32 of these were either newly organized or had changed their grade organization from 1954 to 1963. Curtis reported a survey in New York State reflecting the growth of middle schools there and indicating the generally favorable attitudes of their administrators toward this development.[7] Brod reported in 1966 a survey of state departments of education and local districts showing that 45 of the 50 states had one or more middle schools in operation and that the number of these schools was growing.[8]

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[2] Paul Woodring. "The New Intermediate School." *Saturday Review* 48: 77-78; October 16, 1965.

[3] American Association of School Administrators and Research Division, National Education Association. "Middle Schools." *Educational Research Service Circular* No. 3; May 1965.

[4] Judith Murphy. *Middle Schools.* New York: Educational Facilities Laboratories, 1965. p. 6.

[5] *The Schoolhouse in the City, 1966.* New York: Educational Facilities Laboratories, 1966. pp. 9-10.

[6] Paul John Zdanowicz. "A Study of the Changes That Have Taken Place in the Junior High Schools of Northeastern United States During the Last Decade and the Reasons for Some of the Changes." Unpublished doctoral dissertation. Philadelphia: Temple University, 1965.

We may conclude, I believe, that there is a movement toward a 4-4-4 and 5-3-4 ladder development in various large school systems and that scattered throughout the country there are many individual school districts and schools whose personnel are trying very seriously to find a better educational organization than the now traditional 6-3-3 one. Their reasons vary and are now reviewed.

Why a Middle School?

The arguments for a middle school organization as contrasted with the 6-3-3 one seem to fall into two categories. One set of arguments has very little to do with the program of the school, however valid and significant the individual arguments may be. The other set does relate to the program and therefore will get most attention here.

As to the first category, the chief argument has been related to efforts to relieve segregation. Certainly, this has been the most publicized argument, especially following a 1964 presentation of recommendations for the New York City Schools by an advisory committee headed by President John Fischer of Teachers College, Columbia University. Controversial as the situation has been in New York City, there and in certain other large eastern cities the middle school development seems to have originated as a solution to this problem. The situation is described as follows in the 1966 report of Educational Facilities Laboratories:

> . . . in the cities, the real force behind the emergence of the middle schools is the drive to eliminate *de facto* segregation. The 4-4-4 or 5-3-4 school organization, premised on the middle school, offers itself to embattled school administrators as a hopeful compromise between arguments for the neighborhood school and arguments for total school integration involving abandonment of the neighborhood school. Under these patterns, the largely segregated neighborhood school remains, but only for the youngest children. They would move on to middle schools, serving a larger and potentially more racially balanced area,

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[7] T. E. Curtis. "Administrators View the Middle School." *High Points* 48: 30-35; March 1966.

[8] Pearl Brod. "Middle School: Trends Toward Adoption." *Clearing House* 40: 331-33; February 1966.

a year or two sooner than under the old organization. And they would move up to the high school, characteristically the best-integrated part of the system, a year earlier.[9]

This report notes further that: "In every case, however, the educators and planners stress that the middle school is more than a tool to foster integration. Reorganization, they argue, will accomplish little if it is not tied to an improved educational program. . . ."[10]

The middle school is also being viewed in some communities, as was the junior high school in the 1920's, as a way of solving population and building problems. That is, it may be possible in a particular situation to relieve an overcrowded elementary and junior high situation by moving a grade of each up, perhaps adding a few classrooms to the junior or senior high. Or a new building for a middle school, combined with room in the high school for the ninth grade, may delay or make unnecessary building both an elementary and a junior high. Such plans may also be combined with efforts to reorganize and improve the program.

Undoubtedly the middle school will attract some attention of a bandwagon variety, if this is not already happening. Indeed, it appears that a few school systems are trying to decide whether to reorganize their own schools by studying what other schools are doing rather than by analyzing their own problems.

But the most promising aspect of the middle school movement lies in the deep interest of many educators in developing a better program of education through this approach. Even if some other factor may have provided the impetus, the possibility of new kinds of program development in the middle school can become central. Where the focus is on program improvement, one or more of three closely related reasons for the middle school usually justifies the reorganization: (a) to develop a program of education that has greater continuity; (b) to organize a school program in relation to levels of human development; or (c) to utilize the challenge and opportunity of a new school organization to introduce various educational changes.

Clearly the 6-3-3 ladder has tended to be disjointed, especially at the gap between the elementary and junior high rungs. To move from grade 6 in June to grade 7 in September has frequently meant a very sharp break, with relatively little program planning to make it just a normal movement from one year of schooling to the next. Many criticisms of the junior high school for its imitation of senior high school program and organization suggest that there is too little change in the secondary school rungs of the ladder. Thus, a pattern of instruction and social organization developed for the adolescent is said to be foisted too soon on the preadolescent or early adolescent. To pose the problem another way, both the elementary and the secondary school program, aided and abetted by programs of teacher education for these separate levels, have tended to become somewhat uniform within themselves and very different from each other. As a result there is relatively little change of organizational patterns within the six or so years of each, but great differences between the two.

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[9] *The Schoolhouse in the City*, 1966, *op. cit.*, p. 10.

[10] *Ibid.*

A mere change in the grades included in each of three levels will not bring greater continuity into the program. But joint planning by faculties of existing elementary and junior high schools for the reorganization of their programs into an elementary-middle school pattern and by those of existing junior and senior high schools for the new middle-high school arrangement could at least initially make for better articulation and continuity. Reviews of existing programs in reference to closer articulation of levels and better continuity of the total program can help even if a new structure is not effected. In fact, the chief need in achieving continuity may be to eliminate major barriers between existing levels rather than to create new levels and barriers. Today's interest in individual progress and ungraded schools suggests the desirability of as unbroken a sequence of school experiences as possible.

An educational program that has good continuity from year to year is not one that is unchanging in scope and organization. As the learner moves from child to adult, he should encounter school organizational patterns planned for succeeding levels of human development. The present elementary school has been planned for childhood and the high school for adolescence. It is the in-between-ager, middle school advocates believe, who is served well by neither. Although originally intended to be a transitional school, the junior high school has tended to be a high school with a program and organization more suitable for the fully adolescent youth than for the older child or preadolescent. But the typical elementary school program lacks sufficient variety and challenge for the child approaching adolescence, which comes perhaps a year earlier on the average than when the junior high school was established. Neither the junior high school nor the elementary school provides adequately for the wide range of individual differences to be found in the in-between population, that is, the population of 10- to 14-year-olds.

There is a difference of opinion among those setting up new middle schools as to whether these should be a three-year unit for pupils usually classified as grades 6-8 or a four-year unit for grades 5-8. Some junior high schools have long had the former population, of course, but even in communities seeking a truly different program from that of the junior high school, there is much concern as to whether 10-year-olds and even 11-year-olds should be taken out of the elementary schools. The prevalent argument for doing so is well-illustrated in the following statements in a letter from a school superintendent:

> I think the forgotten youngsters in today's educational planning are the ten- and eleven-year-olds—or expressed in grade equivalents, the fifth- and sixth-graders. . . . The tens and elevens suffer from two extremes. On the one hand they are smothered by love from well meaning primary-oriented teachers, and on the other they are clubbed by perhaps not-so-well meaning administrators who see preparation for high school, graduation, and admission to college as the *summum bonum* of the educational enterprise. Tens and elevens should neither be smothered by today's typical elementary teacher nor educationally browbeaten by the college prep race that now and again pops up in our elementary and junior high planning. . . . An instructional program for tens and elevens should capitalize upon the highly developed inquisitiveness which these children possess. They are indeed still children, but they are now literate children whose interests and desires to know range far beyond the borough hall and the municipal zoo. . . . For those youngsters who reach ten or eleven or twelve and still have learning disabilities, the middle school should sharply focus a battery of specialized educational personnel and tools on the problem.

In some school districts planning new middle school organizations, the school leaders are simply capitalizing upon the advantage a new institution offers for making changes. It is easier, they believe, to experiment with innovations in instructional organization, curriculum content, and staff utilization in a new school bound to tradition by neither its grade label, its former practices, nor its former personnel. Although even the new middle school may include grades previously housed in other units and be expected to engage in some practices and employ some personnel of other units, the new unit is not specifically a replacement of any one unit and can carve out its own operation. Furthermore, the availability of new facilities will make it easier to introduce innovative practices, and the appeal of these facilities will attract personnel competent to do so. This argument is both practical and persuasive, and one is inclined to think that the new buildings may have an edge in establishing really different programs.

This discussion of the changing school ladder has been presented to explain one significant new organizational pattern of an external nature affecting the elementary school. The discussion also provides a context in which to review a variety of internal organizational arrangements that may be applicable to existing elementary schools as well as to the reorganized middle schools. These arrangements are now described in relation to three phases of organization: (a) planning programs for individual students, (b) instructional organization, and (c) staff utilization.

Planning Programs for Individual Students

The program of the middle school may not be better focused on individual students than that of other levels, but one can make a case that it should be. It is in these middle school years that individual differences, especially those of a physical nature, seem most pronounced. It is also here that pressures toward uniformity in education tend to separate those who enjoy schooling and learning from those who do not. Consequently various practices designed to provide focus on the needs, problems and motivations of the individual student are receiving priority in many plans for the middle school.

A first consideration in some middle schools is the system of vertical progress through the school. To the extent that the range of differences among the same age group is an argument for nongradedness—and it is the main argument—there is much more reason for nongradedness in the middle school years than in the primary ones. Not only do differences of intelligence and achievement become wider as children move up the school ladder, but so do differences in such obvious matters as size, physical development, emotional maturity, and growth of independence. And the advent of puberty comes in the middle school years to sharply accentuate differences among individuals, with a few girls becoming pubescent in grade 5 and a few girls and more boys not reaching this stage until several years later. Yet by age 15, about 85 percent of the population has become pubescent, and a relative degree of homogeneity on traits related to this factor is evident as adolescents enter grade 9.

Middle school pupils are still being classified by grade level, by and large, but their programs may be planned individually so as to eliminate most strictures of the graded system. A pupil may belong to a homeroom group of his grade classification but may be associated in varied instructional groups with pupils from other grade classifications. Furthermore, he can be moved from group to group as his teachers see fit. He will also spend some of his time working in special centers as his needs and interests dictate. For example, a pupil may be working in a language development laboratory, a home arts laboratory, and a school store in addition to participating in the basic studies program. His time may need to be scheduled differently from one day to the next for these purposes. Thus, he cannot possibly be a constant member of some conventionally graded class, which remains together all day and year, or even of a series of departmentalized classes meeting daily on a fixed schedule.

Other arrangements of an ungraded nature are also possible in the middle school. If the school ins contiguous to an elementary and/or a high school, a pupil might easily spend some of his time as need arose with a teacher or learning group of the lower or higher school. A modular type of schedule may facilitate differentiation as to the amount of time different learners spend in various situations, although such variations can be arranged within almost any scheduling plan. Early maturing adolescents may frequently be moved into the high school earlier, and children who would really profit from additional time in the middle school may have the opportunity to remain there longer.

The curriculum plan itself of the middle school can provide a focus on the individual. One model being studied by several middle school planning groups suggests a three-way categorization of curriculum opportunities: learning skills, general studies, and personal development.[11] In addition to many possible provisions for individual learning opportunities in the first two categories, especially the first, each pupil can have an individualized program in personal development. This phase includes a health and physical education program geared to the 10- to 14-year-old and individually planned and selected learning opportunities in such areas as foreign languages, typing, music, art, dramatics, and the practical arts. It also includes opportunities to participate in student-managed school enterprises, community work projects, and independent studies in various areas. Individual personal counseling is facilitated by a homeroom arrangement in which the homeroom teacher serves as the basic counselor, perhaps staying with the same group more than one year, and also spends much time with his group in instructional situations.

Independent study, as largely self-directed learning activity, has been conspicuously lacking in the middle school years. Yet it is in these years that the opportunity to work independently may be especially novel and challenging and be used to build interests and skills for continued learning when more opportunities may be expected. The middle school student may be guided into independent study as an outgrowth of any curriculum area, and some middle schools are seeking to provide independent study time and facilities throughout the middle school years. For example, some instruction in basic skills may be programmed and largely self-taught; laboratory or independent study periods may be provided for most or even all students in one or more of the general studies areas of language arts, mathematics, science, and social studies; and a considerable portion of the personal development program can be handled by individualized instruction, including independent study.

One school, then encompassing grades 6-8 and subsequently adding grade 5, developed a "Learning Laboratory" to facilitate independent

[11] See: William M. Alexander and Emmett L. Williams. "Schools for the Middle School Years." *Educational Leadership* 23 (3): 217-23; December 1965.

study. Described as "a concept, not a space" but centered in a large room especially designed and equipped for this purpose, the laboratory was reported as serving the following specific objectives:

1. Provide space and materials for children working on a remedial program
2. Set up special educational programs
3. Set up seminar situations directed by authorities in the necessary fields
4. Provide an environment for highly-motivated children who have little direction
5. Provide students, seemingly without a high degree of motivation, an opportunity to explore possible areas of interest
6. Provide a small group of teachers with the opportunity to plan a teaching experience wherein, for example, three teachers—one math, one science, and one social studies teacher—will work with a selected group of children
7. Provide children of strong intellect, but not necessarily strong performance records, a chance to pursue their interests
8. Provide teachers with the opportunity to group an entire class in such a fashion that each child is assigned to a program that will enable him to work in the area most conducive to learning
9. Provide the reading teacher and French teacher with facilities to carry on individual programs for certain children capable of independent study
10. Provide services to students and teachers in the form of audio-visual equipment, directions from a resource technician, work space, guidance from authorities in various fields, clerical assistance from volunteer mothers, and the use of the library of filmstrips and programmed materials.[12]

Such learning laboratories or learning resource centers, spacious, well-equipped, and well-staffed, offer exceptional opportunities for independent study, indeed for individualized instruction in general. These centers are being planned for new middle schools, and perhaps should and will become central in all school planning.

Instructional Groupings

Most types of instructional groupings used in elementary and junior high schools are also to be found in the various middle schools now in operation. Frequently the organization of the lower-grade groups and that of the upper ones resembles the self-contained and departmentalized patterns of the elementary and junior high schools, respectively. Some so-called middle schools have not broken away from the very practices

[12] *Design for Learning: Learning Laboratory.* Winnetka, Illinois: Skokie Junior High School, May 1964. pp. 5-9.

which characterized the schools they were to replace in part and to improve upon. In other situations, a block-of-time pattern is followed, with the amount of time spent with the one teacher or even a teaching team decreased as the pupils move through the middle school. More or less standard-size classes of 25 to 30 may be used in the basic subjects, with various types of regrouping and subgroupings used for special areas and particular purposes.

As yet no pattern of grouping unique to the middle school is known to be in full operation, but one we developed in a seminar at the University of Florida is being studied and apparently adapted if not adopted in a number of school systems. The major aspects of this pattern are summarized in the following sections.

Homeroom unit. Each pupil is a member of a homeroom group of about 25 pupils who are in the same year in school but are heterogeneously grouped on other criteria. A pupil may receive a portion of his general studies instruction with the homeroom group and be scheduled with other groups in a particular phase of work in which his progress is markedly different from the homeroom group. The amount of time spent with the homeroom unit varies with individual students and typically decreases as a pupil moves from the first through later years in the school.

Class unit. A class unit combines four homeroom units and their teachers for cooperative planning and instruction in the general studies area. The pupils in the class unit, too, are in the same year in school but are otherwise heterogeneously grouped. Four homeroom teachers, each representing a special competence in one of the general studies areas of language arts, social studies, science, or mathematics, meet regularly to plan the instruction for the 100 pupils in the class unit. The team may arrange for some of the instruction to be in a large group, including all of the 100 students, and some of the work to be in small groups for discussion or instruction in basic skills.

Vertical unit. The vertical unit, consisting of four classes, one from each year of the school, provides a "school within a school" in middle schools having 800 or perhaps even 1,200 pupils. Each year-level of the school is represented in the vertical unit so that younger students have opportunities to work and play with and learn from slightly more mature students. Similarly, the older students have opportunity to provide leadership in student activities within the vertical unit and in activities shared by vertical units.

Special learning centers. Special learning centers to serve exploratory interests and special needs include the library and other learning resource centers, reading laboratory, writing and typing laboratory, home arts laboratory, foreign language laboratory, arts and hobby center, music room, and the physical education-recreation center. Pupils are scheduled for work in these centers on an individual basis for both short-term and long-term instruction in the personal development and learning skills portions of the curriculum.

Another aspect of grouping has to do with the varieties of learning situations organized by the teaching teams and individual teachers. The indication is that some newer school organizations will make relatively rare use of the conventional class of 25 to 30 pupils. The following types of instructional arrangements are considered more promising, perhaps for all levels:

1. Large group instruction (from 15 to 400, but typically in the middle school organized as suggested above for 1, 2, 3, or 4 homerooms —25, 50, 75, or 100 pupils)
2. Seminar groups for discussion, sharing of reports, etc. (8 to 15)
3. Laboratory groups and task forces (3 to 8)
4. Tutorial instruction (teacher to learner or learner to learner)
5. Independent study.

In recommending this pattern of instructional organization as a model for future development in an expanding Maryland school system, Robert Anderson and the author made this comment about the related problem of instructional schedules:

> We see no reason why regular schedules need to be followed faithfully in any of the schools, or why it is necessary for all pupils to spend the same number of minutes each week in class instruction in the various contents, or indeed why every subject should be taught every day. Granted that guidelines are needed to ensure that each subject receives its fair share of attention through the year, it seems clear that many American schools, especially at the secondary level, have long been crippled by slavish adherence to requirements of time allocation and class schedules. All too often the program has been dictated not by the actual needs and interests of pupils but by the way the school clock has been divided.[13]

Staffing Patterns

Again, as with instructional groupings, most staffing patterns to be found in elementary and junior high schools are also to be found in the existing middle schools: self-contained classroom arrangements; self-contained classrooms with special teachers; block-of-time for language arts and social studies and for science and mathematics, with other subjects taught on a teacher-per-subject basis; departmentalization in some or all grades; and various patterns of team teaching. One use of two patterns of team teaching in the same middle school is reported from the Barrington, Illinois, Middle School:

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[13] William M. Alexander and Robert H. Anderson. *Toward 1975: A Guide to Schools for 1966-75 in Howard County, Maryland*. Clarksville, Maryland: Board of Education of Howard County, June 1, 1966. p. 8.

> *Sixth grade.* Three comprehensive teams, with 3 to 4 teachers each, instruct the sixth-grade children. Every teacher is qualified to instruct in all curriculum areas, yet each teacher can use his specialized knowledge in major curriculum areas. This means teachers can capitalize on their special talents, can assume the lead in planning learning experiences, and take the major teaching responsibilities in special curriculum areas.
>
> *Seventh and eighth grades.* The teaching teams for these grades are organized so that each team covers one curriculum area; these areas are language arts, science, social studies, mathematics, music, and physical education. Leadership of these teams evolves and may shift according to planning and working needs and the special abilities of each teacher. For example, four teachers instruct English, each specializing in one area, such as poetry or grammar.[14]

A particular staffing pattern was planned for the instructional organization developed at the University of Florida and described in the preceding section. We provided for two groupings of teachers, the teaching teams in the general studies and the special teachers who would staff the special learning centers. Each teaching team member would have a very challenging multi-dimensional assignment, serving as counselor for his homeroom students, as a general classroom teacher—perhaps instructing at times in any and all of the general studies areas, and as a specialist in one of these areas. These functions are similar to those of the Barrington sixth-grade team.

In addition to these functions as individual teachers, each teacher has responsibilities as a member of the team. The team functions as a curriculum-planning committee and as a teaching team. Following the general curriculum plan it develops or adapts, the team devises the specific learning opportunities for particular groups of pupils, decides who is responsible for different areas of instruction and how to share these responsibilities, procures the materials to be used, and selects and directs the evaluative procedures.

Teachers responsible for special centers also proceed somewhat differently from teachers operating in the conventional class arrangement. They teach individuals and groups, when group organization is feasible, for varying periods of time. Much of their work is devoted to guiding individual learning and independent study. The schedule from day to day is highly flexible, with individuals and groups working in the center at the same time but on different projects and programs. It seems highly desirable that these centers be open at hours beyond the regular school schedule.

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[14] *Barrington Middle School: A Report.* Barrington, Illinois: Barrington Public Schools, 1966. p. 7.

Such a program and staffing pattern requires new patterns of preparation and extensive supporting personnel. As to the latter, the new middle schools are generally planning to make maximum use of teacher aides and other paraprofessional helpers. A curriculum coordinator will be needed for each middle school, perhaps one for each vertical unit within larger schools, to provide general leadership in curriculum planning and evaluation and in staff development. Specialists in guidance, research, and other services are also sought.

Programs for the preservice education of junior high school teachers have been generally lacking or inadequate, and now no prototypes for middle school teacher education programs can be identified. At the University of Florida, in our NDEA-supported institute for retraining teachers with elementary and secondary school preparation to work in middle schools, we have operated on the basis of certain assumptions which might become guidelines in developing preservice programs. These assumptions are:

1. The middle school teacher needs more specialization in a teaching field than has been provided in typical programs of elementary teacher education, and somewhat greater breadth than provided in many programs of preparation for secondary school teaching.

2. The program should include considerable work in human growth and development, with some concentration on the levels of later childhood, preadolescence, and early adolescence.

3. The teacher should have much opportunity to observe and participate in team operations of as wide variety as possible, including experience as an associate in a team teaching situation in a middle school organization.

4. Resource units and other types of curriculum plans should be developed with reference to actual situations to provide practice in curriculum planning.

Implications for Earlier School Years

The first implication for the elementary school to be drawn from the middle school movement is the likelihood that elementary school personnel in many communities may have to decide whether to favor or oppose such a reorganization. My personal opinion is that there are as yet too few data to substantiate the advantages of one type of organization over the other. Long-term research is needed to establish comparative data on whether any particular arrangement of the rungs of the school ladder is best.

Meanwhile, local considerations as to advantages to be obtained by reorganization in comparison with those of the present organization will have to be relied upon in determining what stand to take. Probably the critical points to be considered are the types of facilities and programs needed and available under the alternatives considered. And even if the middle school organization itself is rejected, some of its features can be attempted in the regular elementary school.

Several other implications that may be derived from this review of theories and practices of middle school organization are suggested in summary fashion in the following paragraphs.

Nongradedness and individualized instruction. Already there is considerably more nongradedness and individualized instruction in the elementary school than in the junior high. Indeed, one reason for converting the junior high to a middle school is to provide these characteristics of the "new" school in the latter. As this happens, it should be easier to provide them more thoroughly in the earlier school years.

One doubts if any one model of nongradedness will or should survive. Perhaps the really significant idea is that of an ungraded curriculum coupled with considerable individualized instruction, a quite different approach from that of a graded curriculum through which pupils proceed at different rates.[15] As the former approach is adopted, the school ladder becomes basically a matter of continuous schooling rather than a series of steps to be taken, and the relationships between levels very close and elastic.

Continuity and articulation. A philosophy of continuous progress for each learner cannot be achieved in school units as self-contained and discrete as are many of our elementary and secondary schools today. A reorganized school system which provides one program of education but includes three levels corresponding to childhood, the in-between years, and adolescence must facilitate planning between these levels and encourage the ready movement of individual learners and staff members from one level to another. Personnel may need to be shared vertically rather than horizontally. Indeed, continuity and articulation in education

[15] For an excellent comparison of these two approaches, see: Bernice J. Wolfson. "Individualizing Instruction." *NEA Journal* 55: 31-33; November 1966.

may be helped by deliberate effort to share staff members and even to have teachers at times follow their children from one level to another.

Cooperative teaching. Various types of team or cooperative teaching seem likely to become common at all levels of education. Their use in the middle school may give encouragement to related efforts in the earlier school years. Probably the team responsible for planning, teaching, and evaluating the program of the early school years should consist of generalists plus a limited number of personnel working in such specialized aspects of the personal development program as health and physical education and family counseling. The classroom teachers may well be organized further for team planning and teaching of the learning skills and knowledge components of the curriculum. It is assumed, however, that each learner will work closely with one teacher in particular, regardless of how specific teaching responsibilities may be shared.

"Readiness" for the middle school. My fondest hope for those systems in which new elementary-middle combinations are developing is that no one ever worries about whether any pupil is "ready" for the middle school. The name itself suggests the criterion by which decisions are made as to the movement of children from one level to another. They should enter the middle school at whatever age or year in school is designated as the beginning of the middle period. No other criterion of readiness should ever be developed or implied if cooperative planning and relationships in general between the levels are to be promoted.

Perhaps some very early maturing child belongs with an older group, but violence to the basic philosophy of continuous progress will be done whenever a child is moved up or down because he is or is not "ready" in an academic sense. Undoubtedly it will be easier to implement this concept with regard to the elementary and middle schools than it is to the high school, but this concept must prevail up and down the system of school levels if education really focuses on the individual.

New Patterns of In-service Education of Elementary Teachers

Alice Miel

NO PRINCIPAL or other supervisory officer who feels responsible for helping to bring about improvements in schools will wonder why in-service education of teachers is considered in a publication treating "The New Elementary School." An instructional leader recognizes that opportunity for teachers to set new sights and to gain new information and skill is a necessary part of any thoroughgoing change in curriculum and instruction. Are current programs of in-service education adequate for the increasingly high expectations of elementary school teachers held by the public and the profession these days?

To obtain an overview of development, *Education Index* was consulted to note possible shifts in emphasis between 1950 and 1966.[1] Charts A and B reveal some of the results of this search.

An inspection of Chart A shows that some topics, for example, administration of in-service education programs, evaluation, and science, received a certain amount of attention in the professional literature throughout the sixteen-year period. Other topics, such as democratic planning, group processes, and child study, disappeared in the latter half of the period, while television came onto the scene about that time. Chart B reflects heightened interest in certain subjects for institutes at different points during the sixteen years.

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[1] For this search and for subsequent help in devising and analyzing the results of a questionnaire used in the preparation of this paper, the writer is indebted to Janice Wickless, doctoral student at Teachers College, Columbia University, on leave from a position as supervisor of elementary schools, Frederick County, Maryland. The generous help of respondents to the questionnaire and of participants in the conference is also acknowledged.

Topics	*1950-53*	*1953-55*	*1955-57*	*1957-59*	*1959-61*	*1961-63*	*1963-65*	*1965-66*
Administration of program	8	1	6	2	4	3	1	1
College programs	2			1	1	3	4	2
Democratic planning	6	2	1	6				
Group processes	4		1					
Child study	7	1	1	3				
Evaluation	6	5	5	1	1	2	2	1
Incentive	3	2	1			1	1	1
Science	3	1		7	4	1	1	
Television				1	2	3	3	5

Chart A. Topics with a Frequency of Three or More Dealt with in Articles Listed in *Education Index* under "In-service Education," 1950-66 *

	1950-53	*1954-55*	*1955-57*	*1957-59*	*1959-61*	*1961-63*	*1963-65*	*1965-66*
Mathematics	2	4		3	1		3	3
Science-math			1	5	6	9	4	5
Science			3	6	16	9	5	4
Foreign language				1	12	13	12	6
Social studies					1	1		
English						3	6	3
Humanities						3		1
Reading							3	3
Disadvantaged								4

Chart B. Topics with a Frequency of Three or More Dealt with in Articles Listed in *Education Index* under "Institutes," 1950-66

The next step was to devise a questionnaire, using clues obtained from the study of *Education Index*. This was mailed in early December 1966, to 238 local directors and supervisors of elementary education representing every state in the union, the District of Columbia, and Canada, and including small, medium, and large school systems. Two state departments of education, Alaska and Hawaii, were invited to respond, bringing the total questionnaires mailed to 240.

Within a month, 159 usable replies had been received, a return of 66 percent. Table 1 shows the distribution of replies according to size of system and gives the number of elementary school teachers in those school systems. The total number of elementary teachers reported on was nearly 72,000.

* Before 1955, "In-service Training."

Table 2 presents the geographical distribution of the replies. The seven states from which no replies were received are among the less populous states and relatively few questionnaires had been mailed to them.

Size of School System (by No. of Elementary Teachers)	Range	No. of School System Reports	Total No. of Elementary Teachers in School Systems Reporting
200 or less	42–200	46	5,452
201–500	210–500	45	15,993
501–1,000	510–1,000	25	17,467
1,001 or more	1,190–12,000	37	32,834
No information		6	
Grand Totals		159*	71,746

Table 1. Number of Elementary Teachers Represented in Replies of 159 Instructional Leaders

Alabama	4	Missouri	5
Alaska	2	Nebraska	1
Arizona	1	New Jersey	7
Arkansas	1	New Mexico	1
California	8	New York	6
Colorado	5	North Carolina	2
Connecticut	4	North Dakota	1
Delaware	1	Ohio	11
Florida	3	Oklahoma	2
Georgia	1	Oregon	2
Hawaii	1	Pennsylvania	10
Idaho	2	South Carolina	1
Illinois	7	South Dakota	3
Indiana	3	Tennessee	2
Iowa	4	Texas	7
Kansas	2	Utah	2
Louisiana	1	Virginia	6
Maine	3	Washington	1
Maryland	8	West Virginia	1
Massachusetts	1	Wisconsin	3
Michigan	8	District of Columbia	1
Minnesota	9	Ontario, Canada	1
Mississippi	4		

Table 2. Geographical Distribution of Replies of 159 Instructional Leaders

* Includes 5 duplications of school systems, leaving a total of 154 systems represented.

Clues from a Questionnaire

When the replies were tabulated, certain limitations of the questionnaire showed up. It is quite clear that the format caused many to overlook items 1, 9, 16, and 21, for a disproportionate number failed to reply to those items so prevalent in school systems—emphasis on methods, previewing of textbooks, college credit, and use of time after school (see Tables 3-6). On the questionnaire, unfortunately, those items were boxed with the heading of the section for which they were the lead item (content, procedures, motivation, and time). A few other items were unclear to certain respondents. Note is made of this fact at appropriate points in the discussion that follows.

The results shown in Tables 3-6 are based on judgments made by an official reporting for the elementary division of a school system. Failure to reply to some items may have been due to a lack of basis for making a judgment or the item may not have been applicable in the situation. Nevertheless, the replies show some striking differentiations and serve the purpose of this small investigation, namely to secure an indication of possible trends and also clues as to trouble points.

The questionnaire was intended to be succinct and not at all inclusive. Therefore, comments supplied in the space provided at the end of the document by 63, or 40 percent of the respondents, were useful for explanation of replies and supplementary information. In addition, many respondents entered brief notes next to items. Twelve sent illustrative materials or wrote long letters describing programs, although that had not been requested. The comments and additional materials suggest a number of items worth checking systematically in a further study.

The replies and comments yielded information on seven points: (a) concern with in-service education today, (b) content of programs, (c) procedures used, (d) motivation for teacher participation, (e) time for in-service education, (f) financial support, and (g) current role of teacher organizations.

Increasing Concern with In-service Education

An inspection of Tables 3-6 shows that 24 out of the 26 items were checked as being more prevalent in 1966 than in 1956. Six of the 24 items had differences favoring 1966 that ran from 102 up to 135. Eleven more had differences ranging from 59 to 92. Altogether, the 24 items showing an increase in 1966 over 1956 had total gains of 1,766, or an average difference of 73.6. Only two items showed a decrease in prevalence from

1956 to 1966. The decreases were small, five and three respectively, with 13 claiming the same attention at both times to one item and six to the other.

Comments on a few of the questionnaires add to the impression that in-service education is receiving increasing attention. A reply from Kansas City, Missouri, stated:

> In-service education is a great concern here. A newly appointed Director of Extended Services will devote a major part of his time to in-service education and summer school offerings.

The testimony of a director of elementary education was that "there has been much increase in all programs since 1956." A supervisor in a midwestern city wrote: "In-service training needs continue to increase and are gaining more stature." From a southern county came the testimony, "Teachers have an improved attitude toward in-service education."

It is not to be concluded that school systems in this country have moved from no program of in-service education to a full-blown program in ten years. This aspect of school supervision has long had a great deal of attention, as two respondents pointed out. "Our public schools have had an intensive in-service education program for many years," wrote one, while the other stated, "Our in-service programs are not innovations and therefore I have not checked the second column [of the questionnaire, showing relative prevalence in 1956 and 1966]."

Even so, respondents taken as a group report an increase in activity in the items tested. How large a part federal funding plays in the increase can only be surmised.

Content of In-service Education Programs

Three parts of the questionnaire, Part I, items 1-8, and Parts II and IV, throw considerable light on the content of the in-service programs reported on by 159 respondents. Information coming from these segments of the questionnaire as well as from written comments forms the basis of the discussion that follows.

As may be noted in Table 3, item 3, "Emphasis on why (the rationale for change in methods or content)," had the greatest number of ratings of high importance in the current program of in-service education among items 1-8. The tally was 121 out of a possible 159. This item was second highest in gain in attention between 1956 and 1966, with a difference of 133 between the respective tallies of 6 and 139.

Two comments give possible clues to ways school systems may emphasize the "why" back of change. One from a large city ran as follows:

Item	Importance in Current Program				Relative Prevalence				
	Low	Medium	High	Omit	More in '66	More in '56	'66 minus '56	Same	Omit
1. Emphasis on how (methods)	3	39	81	36	72	33	+39	7	47
2. Emphasis on what (subject matter)	9	62	78	10	102	41	+61	1	15
3. Emphasis on why (rationale for change)	6	27	121	5	139	6	+133	3	11
4. Emphasis on group processes	17	69	62	11	89	44	+45	8	18
5. Emphasis on using new media	4	36	114	5	143	8	+135	0	8
6. Study of child growth and development	14	57	76	12	77	57	+20	6	19
7. Involvement, one subject in depth	12	63	66	18	102	27	+75	8	22
8. Organizational changes (non-graded, etc.)	17	58	76	8	136	8	+128	2	13

Table 3. Current Importance and Relative Prevalence (1966 Compared with 1956) of Eight Selected Items Representing Possible Content of In-service Education Programs as Reported by 159 Instructional Leaders

The trend has been to reemphasize objectives, to consider the learner and the importance of pupil involvement—as well as the interrelationship of different disciplines to the development of each pupil. Teachers want, however, the "how," not the what or why.

The second read:

Our current effort is directed to the care of individual needs. We are looking at kindergarten and first-grade children in the hope that we can plan programs for them with due recognition to their needs and abilities. We anticipate this will require great flexibility in grouping, promotion policies, etc.

A close second to emphasis on rationale is item 5, "Emphasis on using new media," with a tally of 114 for high importance. This item showed the highest gain in attention between 1956 and 1966, with a difference of 135. There were no comments relating to this item.

Item 1, "Emphasis on how (methods)," ranked third in number of high importance ratings (tally of 81). The relatively low margin of 39 between 1956 and 1966 tallies suggests that this item has received rather continuous attention. Two comments in connection with item 1 may describe new trends in dealing with an old question. A curriculum director in a small eastern city noted that:

> The emphasis on "how" refers to considerable attention now being given to such ideas as discovery, the investigatory approach, inductive method, process vs. content, etc.

A mathematics supervisor in a large city wrote:

> Your questions do not encourage discrete answers regarding our emphasis upon combining subject matter with discussions of structure, sequence, etc., and the resulting reconsideration of methods. Very true of science and mathematics.

"Emphasis on what (subject matter)," item 2, ranked fourth in high importance ratings, with a total of 78, and shows the moderate margin of 61 between tallies for 1956 and 1966.

Replies to Part II of the questionnaire show "subject areas currently receiving particular emphasis" in the in-service programs being reported on. Reading received the most checks, 116 out of a possible 159. Mathematics was second with 112, language arts third with 98, and social studies fourth with 80. Science, with 78, came next, followed by music, physical education, and art with 47, 40, and 38 tallies, respectively. Other areas of emphasis written in the space provided had one mention each: audiovisual education, child with learning difficulties, children's literature, composition, economics, education for disadvantaged, handwriting, history-government, linguistics, preschool-kindergarten, Spanish.

Comments written on the questionnaire added other pertinent information. A health education course was mentioned by one respondent, a course in the content of elementary mathematics by another. In some school systems "all subject areas are being considered," while in others "one discipline a year" is covered. One respondent stated that attention to subject matter is "now not specific information but areas or units needed such as economic education, space."

Two gave explanations for current emphases. Wrote one California educator: "With the new state legislation requiring state testing of reading in grades 1, 2, 3, and 6, we are stressing reading throughout the elementary schools." An instructional leader in Virginia commented: "Added attention is being given to social studies, language arts, and English. This is due to the fact that this is adoption year in our state for these disciplines."

Part IV, which dealt with "institutes on college campuses," was difficult for the respondents. Many had no records, others did not have time to dig out the information, still others were confused by the term "institutes" and in some cases equated it with regular college courses. The replies to this item are, therefore, open to question. Thirty-three respondents made no reply to this part. Those replying estimated totally that 7,422 teachers had attended mathematics institutes in the past five years; 5,760 had attended institutes devoted to language arts, reading, and/or linguistics; 3,122 had attended science institutes; and 2,213, institutes dealing with social sciences. Guidance institutes were fifth in rank with 1,298 attending, and foreign language institutes were sixth with 935. One respondent wrote in a mention of an institute on special education.

One comment gave specifics on two types of institutes:

> Science includes Minimath and AAAS pilot groups who go to the University of Arizona regularly each week. Math includes Minimath and SMSG conducted by the University in cooperation with pilot groups.

Another respondent wrote:

> Most institutes have been in the areas of science, mathematics, and education of the disadvantaged. This is probably the most significant trend—emphasis on improving educational programs for deprived children.

Two comments pointed to the limitations of institutes. A respondent from a large city noted that only a handful of teachers could be accommodated "since institutions try to include many districts." Another wrote, "Most institutes in the disciplines are for secondary teachers or for elementary teachers with *majors* in the subject area. It is very difficult for elementary teachers to get into these."

Finally one expressed what may be the prevailing situation, "Many are taking courses in planned programs, but we do not know of any elementary teachers attending institutes."

Item 6, "Study of child growth and development," and item 8, "Consideration of organizational changes (nongraded, team teaching, etc.)," were tied for fifth-sixth place in number of tallies (76) for high importance in the in-service education program. However, item 8 was third highest among items 1-8 in difference in prevalence in 1956 and 1966.

In connection with item 8, one respondent wrote in "individualization of instruction" as a further example of organizational change. Another wrote this comment:

> We will be actively involved in organizational changes in the near future as we hope to build two new elementary schools with additions to three other

plants. We are in the planning stages for the non-graded school. We have one building that has a modified approach to non-graded structure.

Item 6, "study of child growth and development," shows least change between 1956 and 1966. Brief comments written next to the item include:

> But still goes on [more prevalent in 1956]
> We are doing more now
> In conjunction with above [items 1-5]
> Especially in early childhood
> Already known [reply of one checking low importance].

The interest of elementary teachers in guidance, as reported on the questionnaire, seems related to item 6. Longer comments appended at the end of the questionnaire are:

> Attention to recognized research in both child growth and in academic areas seems little emphasized.
>
> Emphasis is being placed on the study of child growth and development because Virginia will initiate a statewide kindergarten program in 1968.
>
> Our special study groups à la the University of Maryland are declining in membership. However, under the federal programs, attention to and study of the development of young children have markedly increased. We have at present 38 classes of four-year-olds. In addition, there is a kindergarten study group that is in its second year. This group is concerned with follow-up of Head Start and needed revisions in their kindergarten curriculum. There are 59 teacher aides assigned to kindergarten classrooms in schools which have been identified under ESEA.

Gerthon Morgan, Director of the Institute of Child Study of the University of Maryland, was consulted for his view of the status of child study among teachers.[8] His report was that, while some school systems formerly using the services of the Institute have become self-sufficient and are no longer directly served, new interests are springing up in other schools that take the place of the old centers. The Institute continues to have as many requests for services as it can accommodate. Dr. Morgan gave as his general impression that there is considerable growth in organized and directed study of children by teachers, especially in the states of New Jersey and California, and in Maryland where half of the counties are participating in a newly revised two-year program.

"Involvement over time with one subject matter area in depth," item 7, placed seventh in assignment of high importance with a total of 66 checks. There was a considerable margin, 75, between tallies for prevalence in 1956 and 1966 in relation to this item, however. One respondent noted that he was not sure what was meant by the item. Some of the comments relating to item 3 are pertinent here. The respondent who mentioned attending to "one discipline a year" was giving a response useful in connection with item 7. Other comments related to this question were a reference to dealing with subjects "in cycles" and one to studies "this year and last because of a weakness." One midwest supervisor wrote:

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[8] Telephone conversation with Janice Wickless.

> We study curriculum areas on a planned schedule so that each area is restudied every four years.

In an eastern city, mathematics was the subject of study for four successive summers, followed by a proposed three-year cycle on children's language development and linguistics. In another city "85 teachers and principals (one from each elementary school) will take a course (two semester hours in after-school sessions) this second semester on the content of elementary mathematics."

The lowest ranking item in this section was number 4, "Emphasis on group processes," with 62 tallies for high importance. This item had the largest number of tallies (69) for medium emphasis, however. Also it showed a modest increase of 45 in emphasis from 1956 to 1966. Three comments raise an interesting question. One wrote in next to the item "more on individualization," another "individualization in group." A third comment was: "It is my opinion that there is a stronger trend toward individualization of instruction as per the Duluth, Minnesota, project and others." These comments may imply a belief that a teacher has less need for skill in group processes if he individualizes instruction.

One comment on the content of in-service programs in the summer of 1966 cuts across several of the items 1-8 and reinforces other comments showing interest in the disadvantaged child. The comment from a large midwestern city listed the following program offerings for teachers: (a) teaching strategies for inner city schools, (b) curriculum for inner city schools, and (c) understanding and teaching inner city children.

Procedures for In-service Education

As Table 4 shows, "Teacher involvement in developing curriculum guides," item 10, placed first in the section of the questionnaire devoted to procedures for in-service education, with a tally of 97 for high importance. The difference in the ten-year period is 59 for this item. Notations in this connection were:

> We are making a study to revise courses of study written 1955-63.
>
> Elementary curriculum guide written by teachers in 1962-63. It is currently due for a revision. Entire elementary faculty working in teams in various phases.
>
> We chose as a two-year project the revision of our entire elementary curriculum guide.

Item	Importance in Current Program					Relative Prevalence				
	Low	Medium	High	Omit	Other*	More in '66	More in '56	'66 minus '56	Same	Omit
9. Previewing textbooks	12	43	52	52	0	57	23	+34	17	62
10. Teacher involvement in curriculum guides	11	44	97	6	1	91	32	+59	23	13
11. Implementing outside programs	38	80	24	14	3	63	51	+12	7	38
12. Utilization of consultants	2	58	93	6	0	127	11	+116	11	10
13. Demonstration teaching	30	72	49	8	0	74	54	+20	12	19
14. TV for in-service education	60	51	25	14	9	102	10	+92	1	46
15. Programmed instruction for in-service education	103	26	5	18	7	71	8	+63	5	75

Table 4. Current Importance and Relative Prevalence (1966 Compared with 1956) of Seven Selected Items Representing Possible Procedures for In-service Education as Reported by 159 Instructional Leaders

System-wide meetings and individual school meetings are held in connection with developing curriculum guides for 1967.

City policy.

A few teachers are involved.

Three comments were not related to curriculum guides as such but to teacher involvement in general:

I have become increasingly aware of the barriers to good communication among all staff—teaching, supervisory, etc. We are experimenting with some new committee structures in an attempt to get all staff involved in discussions on curriculum.

We have involved more teachers in planning; many of our teachers have made a greater contribution as a result of summer institutes.

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* Includes write-ins signifying "none" and, in relation to item 11, one question mark and one comment "varies with the subject matter."

> We have some intensive grade-level planning sessions in our immediate future; but the exact emphasis and content are still in the embryonic stage.

Item 12, "Utilization of consultants," was second, with 93 checking it under high importance. Here the difference between 1956 and 1966 is the highest in this section, 116. Relevant comments were: "Professional as opposed to those provided by publishers," "College," "Federal project," and "More resource teachers today." One said, "During this past year we have had music, mathematics, language arts consultants working directly with our teachers." One who indicated that use of consultants was more prevalent in 1956 mentioned "lack of funds." Another stated, "Always used in our county."

"Previewing textbooks," item 9, was a poor third, with 52 checks for high importance. There was a small difference, 34, in tallies for 1956 as compared with 1966. Seventeen noted that the emphasis was the same at both times. Only two comments pertained to this item:

> Continuing appraisal all through the year.
>
> Emphasis more on instructional materials.

"Demonstration teaching (by teachers or consultants)," item 13, was next in rank, with 48 checks for high importance. There were 72 tallies, the highest for any of the 26 items on Part I of the questionnaire, for medium importance of this item. A difference of 24 between 1956 and 1966 tallies indicates that this was not an innovative practice.

Perhaps item 13 should have been stated more broadly to include teacher observation of normal classroom procedures. One respondent commented, "We continue to have an extensive program of in-school hours observation lessons taught by teachers." Another mentioned that "use of the overhead projector to direct the attention of new teachers to important aspects of what they were seeing has improved our demonstration program." A third wrote in "radio and television," probably as a means of making demonstration teaching accessible to more observers.

Item 11, "Implementation of programs prepared outside local school system," and item 14, "Use of television for in-service education," ranked close together, with high importance tallies of 24 and 25 respectively. Item 11 shows little gain since 1956, while item 14 had the high gain, 92. In the case of television, however, more prevalence must be viewed in relation to the 60 checks for low importance, second greatest of 26 items in this regard. Both items had a high number of omissions, and, in the case of television, nine respondents took the trouble to write in comments indicating "not used."

Comments on item 11 were:

> Varies according to subject matter. More prevalent at secondary level.

ITA, ESI, Princeton Plan, etc.
State curriculum guides.

The last comment shows that some respondents perhaps interpreted the item to include state departments of education as sources of outside programs, whereas the intent of the item was to learn the impact of various programs in subject matter areas prepared by academic scholars. The former interpretation may help to explain the small increases since 1956. Comments suggesting less availability of summer institutes for elementary teachers reported earlier may also be saying that elementary teachers have not been prime targets of packaged programs. Additional comments relating to this item throw further light on interpretations of respondents. One respondent wrote:

> This seems to be the day of federal programs and increasing specialization in the elementary schools, with decisions being made by those working with the implementation of Federal funds.

Another noted next to the item, "Develop own," and a third made an elaborate comment in the same vein:

> There is *less* emphasis and desire by superintendents of local districts to follow what other districts are doing and greater emphasis upon individualizing guidance, teaching, with a greater desire to meet individual differences. There is greater recognition that curriculum should be decided by the system or combined systems rather than having it written by an agency outside the school system. There is greater cooperation between school districts, through committees attempting to formulate broad goals acceptable to a greater number of districts with respect to curriculum. This is a new movement in this area. It is a hopeful sign in my opinion. It has come about by a felt need and expression of a number of superintendents who found their prerogative in curriculum content, methods, and making being usurped by private agencies.

Few comments related to use of television for in-service education. Minneapolis reported use of a fifteen-minute telecast for teachers during the noon hour. Another respondent wrote:

> All elementary teachers have viewed a series of television presentations on teaching of reading (methods).

Other comments were "Coming," "Not available but in future plans," "No ETV," "Only as children view it," and "Limitations."

The final item under procedures was "Use of programmed instruction," item 15. There were several signs that little use has been made of this tool. Only five rated it of high importance in the current program, while 103 rated it low. Although there was a gain of 63 in prevalence from 1956 to 1966, 73 indicated no use was made of it or made no reply at all. No other comments were made on this item.

Item	Importance in Current Program					Relative Prevalence				
	Low	Medium	High	Omit	Other*	More in '66	More in '56	'66 minus '56	Same	Omit
16. College credit	19	36	60	43	1	82	16	+66	6	55
17. Certificate renewal credit	32	56	34	30	7	67	28	+39	16	48
18. Salary advancement	11	35	91	18	4	115	7	+108	10	27
19. In-service program individualized	26	52	51	28	2	99	12	+87	5	43
20. Participation voluntary	11	54	72	20	2	93	20	+73	19	27

Table 5. Current Importance and Relative Prevalence (1966 Compared with 1956) of Five Selected Items Representing Possible Motivation for In-service Education as Reported by 159 Instructional Leaders

Motivation for In-service Education

"Salary advancement," item 18, was checked by 91 respondents for high importance in motivation for in-service education and a gain of 108 from 1956 to 1966 would indicate that its importance has increased in recent years (see Table 5). From the comments in other connections it appears that teachers may secure salary increases after achieving a new degree or set amount of college credit or they may be reimbursed for each college or other in-service course but not both, for "that would be double pay."

"Having participation voluntary," item 20, was second in rank in the motivation section, with 72 tallies for high importance. The shift from 1956 to 1966 was considerable, a difference of 73. One respondent noted, "It has always been [voluntary]." Another mentioned a voluntary evening course attended by half of the staff.

"College credit," item 16, received 60 mentions in the high importance category and showed a considerable shift from 1956 to 1966, a difference of 66. A number of comments related to this item:

* Includes write-ins signifying "none" and, in relation to items 17 and 19, question as to meaning.

> College credit courses are encouraged but voluntary.
>
> We have heavily attended in-service courses in the district and have easy access to a major university and three state colleges. It is impossible for me to estimate the attendance in college classes, but it is large in all areas of instruction and has been for many years.
>
> Many teachers are attending summer school, some to obtain Master of Arts degrees. Others are taking evening courses to update certificates.
>
> The active program in in-service education sponsored jointly by NDEA and the county has provided an unusual amount of opportunity for teachers. In fact, 75 percent of our staff over the past three years have had these courses. Arrangements have been made to allow college credit for such programs.

It is not always clear from comments whether college courses or courses offered by the local school system are referred to. Local courses probably are the subject of the two comments following:

> Many of our courses have been written by teachers and are taught by teachers. We are not competing with the colleges. We are providing the practical, updated kind of experience that colleges should but don't provide.
>
> We do not offer courses for college credit.

Item 19, "In-service program individualized," apparently puzzled some. One respondent indicated he was "uncertan of meaning." There were 51 tallies of high importance and a gain of 87 from 1956 to 1966. One comment on this item was:

> The instructional staff (central office) and committees of *teachers* and *principals* plan the preschool in-service; individual faculties plan the days in schools.

Two examples of activities open only to certain individuals suggest possibilities along this line:

> We have student teachers in our school system from a state university. We have many sessions with the college supervisors which have been beneficial as an in-service education to our supervising teachers. I did not find this classification on the questionnaire.
>
> At the present time we have an experimental and controlled program in reading.

"Certificate renewal credit," item 17, ranked fifth in the motivation group, with 54 tallies for high importance and a difference of 39 between 1956 and 1966. Sixteen indicated the prevalence of this item had stayed the same, one explaining, "This is a state law." Another stated that this "has not existed in our system." Though the language, "certificate renewal credit," may not be used nationally, many comments showed that there is an expectancy of refresher training: "Teachers must earn eight quarter hours every four years," "We require six hours of approved professional

Item	Importance in Current Program					Relative Prevalence				
	Low	Medium	High	Omit	Other*	More in '66	More in '56	'66 minus '56	Same	Omit
21. After school	16	39	47	57	0	38	43	−5	13	65
22. Saturdays	77	20	7	46	9	35	38	−3	6	80
23. Released time during school hours	32	49	52	24	2	101	9	+92	12	37
24. Summers (local program)	18	44	69	25	3	110	8	+102	8	33
25. Extended year for teachers	27	39	59	32	2	90	6	+84	7	56
26. In-service days during school year	30	47	59	21	2	93	17	+76	16	33

Table 6. Current Importance and Relative Prevalence (1966 Compared with 1956) of Six Selected Items Representing Possible Time for In-service Education as Reported by 159 Instructional Leaders

growth credit for each three-year period," "It is required as a condition of tenure." One large city system has a more elaborate plan:

> Each teacher with a bachelor of science degree must earn four semester hours graduate credit every six years; teachers with a master's degree, three semester hours every six years. "In lieu of credit" is granted under certain circumstances. If a teacher fails to meet requirements, he stays on salary step, then moves to a reduced step.

Time for In-service Education

"Use of summers for local programs of in-service education," item 24, "Extending the year for teachers (prior to or after the school year)," item 25, and "Scheduling in-service days during the school year," item 26, were the top ranking ways of finding time for in-service education, with tallies for high importance of 69, 61, and 56 respectively (see Table 6). Summer programs showed the greatest gain, 102, from 1956 to 1966. The extended school year showed a gain of 84, and in-service days during the school year, a gain of 76. "Released time during school hours," item 23, was next highest, with a tally of 52 for high importance. This item showed the second highest gain in this section of the questionnaire, a difference of

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* All write-ins signifying "none."

92 between 1956 and 1966. While use of after-school time still has a tally of 47 for high importance, it is one of the two items which lost ground between 1956 and 1966. The use of Saturdays not only lost ground but is quite unpopular, with only seven tallies for high and 79 for low importance.

Three comments suggest that the summer program may include work on the curriculum:

> We are employing and using more of our own staff for curriculum improvement and self-improvement *during the summer.*
>
> Teachers are paid $600 for working during the summer for one month on the curriculum development program.
>
> Prerequisite planning and reading for production of guidebook.

Another respondent noted: "We also have a summer research and development program which pays individuals up to $750 for approved projects."

Summer is also a time for workshops: "We have had approximately one half of the staff participating in one to four week workshops during the summers of 1962-66."

The extended school year sometimes consists of one or two weeks before school opens in the fall. Three respondents mentioned that this arrangement is only for new teachers. Sometimes it follows the close of school in the spring and sometimes it is a combination of the two, for example, "five days prior and one day following."

Pertinent comments were:

> This year for the first time we have added five days to the school year for teachers. These extra days are to be for organized in-service training.
>
> Each summer for the past five years we have provided an in-service program for a week or two right after school closed. For four years it was voluntary, the subject mathematics. The past summer and continuing for two more years the subject is children's language development with an emphasis on linguistics. Teachers are paid under a Title III grant (ESEA).
>
> We are moving away from after-school and Saturday in-service programs and are recommending an extended year. A proposal is before the superintendent in which all teachers who are on special probation because of inadequate work will be required to attend some in-service courses in the areas of their deficiencies.

In-service days received few comments. One respondent mentioned "two county institute days only." Another gave the figure of three days. A city system in Tennessee has "four days during the year (usually held from 3:30 p.m. to 8:30)" since the state requires ten days for in-service education. The remainder is scheduled before and after the school year.

Another respondent stated, "Since our in-service education work is done on school time, all teachers are required to participate."

Released time during the school day drew several comments. Wrote one respondent: "We have had in-service programs during school hours for the last twenty years." Others mentioned a common arrangement in schools, early dismissal so that meetings can be held partly on school time, partly on teachers' overtime. One hour a month and one hour for six days a year were figures stated in comments. "More teachers are freed to go to day meetings planned by county or state," was another comment. One respondent explained:

> The increased involvement of teachers in after-school educational programs under Title I has increasingly encouraged boards of education in our county to provide substitutes or find other means to release teachers during the regular school day for in-service activities.

Another respondent saw a limitation in such an arrangement:

> Every now and then I am amazed at the great discrepancies between verbalized goals and practices. There is need for more time for in-service work. Our Board of Education does permit the employment of substitutes to free teachers for curriculum work—but *all* teachers need time for discussion, planning, etc.

An Illinois educator declared that the "five-hour law" in that state makes released time impossible. And a Missouri supervisor observed:

> It seems to me that there is a growing opposition among teachers toward in-service programs unless released time is provided for them. Parents oppose released time. Perhaps an extended school year is the answer.

Both after-school and evening hours are used for some purposes. As one supervisor wrote, after-school time is used "primarily with new teachers now." Courses for credit frequently are scheduled after school or in the evening. Material from one respondent showed that his system had recognized the unpopularity of after-school meetings by cutting down on their number and spacing them carefully through the year.

Saturdays seem to be used mostly for activities of professional organizations, for attending nearby conferences, or for college courses, although one respondent observed that "recently Saturdays have been reestablished."

The general difficulty of finding time for in-service education programs is summed up in this comment in one of the letters received:

> We are working very hard to find times for teacher planning and for in-service programs within the school year and the school day. Graduate programs in which teachers are involved, their own family responsibilities, and the gen-

eral trend away from "after-regular hours" work have made it very difficult to provide effective programs.

While no item on the questionnaire specifically invited comments on financing in-service education programs, a great many comments focused on this problem. "Lack of funds" was written in frequently to explain low emphasis on items particularly in the sections dealing with motivation and time. Several mentioned having lost elections dealing with school levies; for example:

> We lost the special election for an operating levy in December, so our plans for expansion of in-service education for 1967 will have to be curtailed. We had hoped to do considerably more with released time within the school year and special employment for curriculum development during the summer.

Other comments showing the relationship between program and budget were:

> Each elementary supervisor has a fund available for providing substitutes so that teachers can be released for in-service experiences. In addition, we provide a preschool workshop for new teachers. Since this is provided prior to the beginning of the school year, teachers are paid for their days in attendance.
>
> If funds are available we plan to work on local guides on released time and during the summer in several areas.
>
> We must have time for this important work. We have had excellent work done during the summer, but such a small amount has been budgeted.

The kinds of budgets that may be required are reflected in two comments:

> Our system is currently budgeting $40,000 for scholarships, $30,000 for sabbatical leaves, and more than $20,000 for in-service education in addition to foundation, Federal, and state supported programs. [A system with 575 elementary teachers.]
>
> The Board of Education has adopted a policy to reimburse the professional personnel $30.00 per semester hour for college credit in educational courses. [A system with 120 elementary teachers, which also pays $750 to individuals with approved research and development projects.]

Federal funds were mentioned frequently as a source of support for in-service education; for example: "Title I efforts proved in-service training of Head Start teachers, teacher aides, reading teachers, and all teachers in Title I schools for methods and understanding of children."

Current Role of Teacher Organizations

That teacher organizations are a new force to reckon with in planning in-service education programs was shown clearly in several comments:

> The in-service programs in our school district are being affected by a small but active AFT group. We are in what might be called a state of flux at this point. [District with 233 elementary teachers.]
>
> Morale in the system is low at this time for two obvious reasons: a school levy has twice been defeated and the Education Association and the Federation of Teachers are feuding over bargaining rights with the Board of Education. Consequently, it is impossible to release teachers on school time either for in-service or curriculum work because of lack of funds. [System with 525 elementary teachers.]
>
> We have just been through the experience of a teacher strike—a DEA-SEA-NEA one—and the adoption of a negotiations agreement which includes "matters of common concern" as negotiable items. This has been a pretty shattering experience in terms of the rifts, the bruises, the deep hurts. I see this as having a very marked influence on future in-service programs. It is too soon to predict precisely, but at the rate that negotiations seem to be spreading, I would guess that those communities not yet having such an agreement would soon be experiencing it. With curriculum development and welfare matters relating to time for in-service work considered negotiable matters, local teacher leadership will be of great importance. If money and hours of work are the major concerns, we will need to find much more money to finance schools.

One comment gave credit to negotiations, mentioning "rapid developments in this area during the last three years because the local NEA affiliate has become active through professional negotiations."

It seems likely that instructional leaders in the years ahead will need to face certain realities, such as those referred to in the following statement:

> It is questionable whether our system can maintain any semblance of an adequate in-service program (voluntary) with the present militant attitude of teachers requesting duty-free lunch periods, release from non-instructional time, and more pay for less work.

In Summary

From study of the questionnaire data, it appears that these generalizations may be made about reported developments in in-service teacher education:

1. In-service education is seen as highly important.

2. Emphasis on the rationale for change and on using new media considerably outranks emphasis on methods, subject matter content, organizational changes, and child growth and development. Child study in some cases has concentrated on younger children and the disadvantaged. Emphasis on one area of subject matter at a time and in depth appears to be fairly common. Emphasis on group processes is assigned least importance among eight items listed under content of in-service programs.

3. Teacher involvement in developing curriculum guides and utilization of consultants far outrank other procedures listed in the questionnaire. Implementation of programs prepared outside the school system and use of television and programmed instruction for in-service education received far fewer tallies for high importance than any of the other 26 items on the questionnaire, except the use of Saturdays.

4. Salary advancement far outstrips other items listed under motivation for in-service education, with voluntary participation a not very close second and college credit a poor third.

5. Use of summers, an extended year for teachers, in-service days during the school year, and released time during school hours all outrank after-school time in importance. The use of Saturdays ranks extremely low.

6. Those items showing marked prevalence in 1966 as compared with 1956 (a difference in total tallies of 100 or more) are: using new media, rationale for change, organizational changes, utilization of consultants, salary advancement, and use of summers, in that order.

7. Problems reflected in comments are: financial support of in-service programs and the role of teacher organizations in resisting overtime work.

Although respondents were not asked for their general assessment of the adequacy of the programs being reported on, nevertheless comments pointed clearly to the need to reach more of the teachers and to have time and funds sufficient for that purpose. On the basis of this study and other information, the writer has concluded that most current programs will require drastic changes in conception and implementation if they are to provide the continuing education needed by teachers.

In the remainder of this paper, a fourfold proposal for improving the in-service education of teachers for a new elementary school is presented.

Looking to the Future

In a field such as teaching, which is not only complicated but rapidly changing—in knowledge base, functions, and tools—provision for continuing education is even more important than in other lines of work. As other contributions to this series of papers clearly show, new ideas must be incorporated, new postures taken, new skills developed.

An adequate program of continuing education for elementary school teachers in the years ahead calls for improvement along four lines: (a) participation of those for whom the program is intended, (b) time and funds allocated for doing the job, (c) quality of experiences made available, and (d) relationship of in-service education to organized programs of curriculum improvement. Each is discussed in turn in the following pages.

Providing for Full Teacher Participation

Any organized program of in-service education of teachers must rest on the assumption that the individual professional will maintain his own program of self-improvement above and beyond the opportunities provided by the school system. But the job of retooling for the emerging elementary school is too huge to be cared for through self-managed individual development alone. Neither can the profession any longer depend solely on overtime group work by volunteers, representing the more "professional," hardy, and personally unencumbered teachers in a school system, to maintain the overall competence required of the entire teaching group today. All teachers must continue to learn on the job.

The principle that teacher participation must be voluntary, cherished by so many teachers and supervisory officers alike, needs careful reexamination. Perhaps some of the values of voluntary participation can be maintained through providing ample and convenient time for in-service education, arranging opportunities for experiences that are seen by the participants to yield substantial new knowledge and skills, and involving teachers in planning the what, how, and when of their continuing education.

For the individual teacher, considerable freedom of choice may be provided among useful alternatives, but the expectation must be that, within a given period of time, every teacher will take part in some organized, depth experience designed to develop new knowledge or skill.

For good reason many local supervisory officials have been concentrating on inducting new teachers and working with the weakest of the returning staff. But the time is past when communities can afford to neglect the "good" teacher. The relatively high plateau on which the strong teachers of many a school system have, by default, been encouraged to rest, is not high enough when judged in terms of new hopes for the elementary school. If the program of in-service education is properly designed, the strong can become stronger and the whole level of the teaching force can move up.

In some cases all teachers with a common new responsibility need training in order to carry out that responsibility competently and consistently. For example, teachers may be attempting to change from teaching science as a reading lesson to teaching it as a way of inquiring; they may be trying to replace a formalized reading readiness program with a language experience approach to teaching reading; they may be struggling to introduce cooperative planning into classrooms where children have previously only followed orders; they may have set out to use multilevel materials in their teaching.

In many cases the choice of area in which to expand may be left to the individual teacher, but the instructional leadership of a school system is responsible for fostering a climate that encourages growth and for providing abundant and varied opportunities for all teachers to pursue new experiences under the direction of experts and in the company of others.

Allocating Appropriate Time and Money

As many comments on the questionnaire made clear, time costs money. Respondents showed that both they and the teachers believe it is inefficient to have in-service education activities scheduled on top of a full day with children. But other solutions—summer programs, extended school year for teachers, released time during school hours, and in-service days—all require a sizeable budget allocation, especially if a total staff is to be served. Consultants, resource persons for workshops, travel to national conferences, sabbatical leaves for teachers, and the administration of an in-service program itself, these are budget items. Adequate professional libraries and curriculum laboratories require funds. So does television as a medium of teacher education. Programmed instruction, simulation devices, and other forms of instructional technology for teacher education will require considerable outlay before they are widely available, and after that there will be recurring costs with extensive use.

However, neither educators nor the public have had a chance to learn what it costs to keep a work force up to date. The "old-timers" in the profession who so willingly gave extra hours for teachers' meetings, curriculum work, and in-service education with no expense to the public may actually have done a disservice in concealing the real costs of such human energy. Militant teacher groups that are now protesting overtime work without pay may in the long run help education, like industry, to provide sufficient on-the-job time to take on new knowledge and skills.

What kind of time is required for bringing and keeping a professional group such as teachers up to date? Several instructional leaders indicated that they use a combination of ways of finding time for in-service education. This seems reasonable, for a long period of uninterrupted time is best for some learning tasks; a short, intensive period is useful for others; and for still others spaced time is preferable.

For example, a summer program is well used for becoming acquainted with the "new" math or linguistics; developing inquiry skills in a natural, physical, or social science; furthering proficiency in a foreign language; making studies of children; designing or carrying out a research project; or creating materials, such as filmstrips, booklets on facets of community life, or transparencies.

Paid in-service days at the beginning of the school year are useful not only for orientation of new teachers but for enabling groups of teachers with similar or shared responsibilities to make detailed plans for improving their classroom operations in the coming year and to study materials and build background knowledge. Days at the end of the year are especially suitable for evaluation purposes if data have been collected during the year according to a well-developed plan.

Days scattered through the year give opportunity for spaced work with one consultant or for receiving stimulation from a variety of sources. They allow time for interim evaluation and replanning. They also could allow for half-day faculty meetings at least once a month. One possibility is scheduling children for a four-day week and teachers for a five-day week for an extended year. This would create a more leisurely pace and more continuous learning for children and would give teachers one day a week for purposes such as those just named. This would, however, mean an eleven-month school year for children as well as teachers.

Released time during school hours needs rethinking. With sufficient staffing by extra, generalist teachers and plenty of specialists, with sufficient laboratory and library-media centers, and with careful scheduling, it should be possible for the teaching day of every elementary school teacher to be shorter than a child's day. The teacher's duty day would, however, be longer than the children's. If each teacher were to spend with children from one-half to two-thirds of his duty hours, the remaining time could be in a sufficiently large block to be useful for such activities as subsection faculty meetings, small group planning by teachers, individual conferences with parents and/or children, consultation with resource persons, search for and study of materials, record keeping, and study of records and of children's work. Early dismissal plans and releasing teachers through hiring of substitutes might not then be necessary. Some teachers might be reassigned for a semester or a year for such purposes as conducting a piece of research; developing a specialty needed by a staff; serving as an exchange teacher; spending time in another country gathering information, pictorial and taped records, and artifacts to be shared with many teachers and children back home; visiting a number of school systems to learn how a certain problem is being worked on; writing curriculum materials; or preparing materials for children's use.

The point of all these suggestions is to create time for teachers to focus on tasks that will advance their competence and make a contribution to colleagues and children without the distraction of feeling that they are not meeting other responsibilities usually scheduled at that time.

With time for in-service education built into the paid duty hours of a teacher, he could then be free to schedule his personal life out of hours.

After-school time and Saturdays would still be needed by teachers for rest, recreation, continuing their general social and cultural education, taking part in community activities, and meeting family and social responsibilities.

An ideal solution to the problem of time for continuing education of teachers would be to employ all teachers, at decent salaries, for a twelve-month year. This the nation can better afford than to allow its children to be taught by obsolete teachers. The time of teachers could then be scheduled in a variety of ways, combining some of the features described in preceding paragraphs. For example, one of the summer months could be used for vacation. The eleventh work-month could be devoted to local workshops, courses for college credit, travel, and possibly teaching, according to a planned cycle.

If the twelve-month plan were combined with regular sabbatical leaves for teachers, either a full year out of every seven or a semester every third or fourth year, university study might be restricted to summer and leave times. The result should be less harried teachers and better university students.

For neophyte teachers, the summer period could be a bridge between preservice and in-service education.

If schools were to provide a twelve-month year for children also, with vacation periods for different groups staggered throughout the year, teacher schedules could then be staggered also and the burden on colleges and consultants could be spaced through the year rather than concentrated in the summer.

Improving the Quality of In-service Education Programs

Little will have been gained by financing a program with ample time for all teachers to continue to learn on the job unless the educational opportunities provided are of a high quality. One conclusion of Schild, who made a study in the early 'sixties of certain practices in in-service education in selected schools, was that "one of the most obvious weaknesses revealed . . . was the widespread lack of long-term planning and logical organization."[8]

A well-planned, long-range program of in-service education of teachers will have the following characteristics:

1. The program will have something for everyone: the novice and the

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[8] Robert J. Schild. "A Survey of Certain Practices and Some Proposed Directions for In-service Education Programs in Selected Schools of the APSS." A summary published in Associated Public School Systems, *Special Report*. New York: Teachers College, Columbia University, undated. Mimeographed. p. 4.

experienced, the professional and the para-professional, the teacher engaged in team teaching and the one managing a so-called self-contained classroom, the specialist and the generalist. The starting points and the needs of each will be respected.

2. The program will be geared to help teachers make substantial and continuous progress toward carefully selected, highly important targets, such as learning to teach inductively or learning group process skills useful in working cooperatively with children and peers. In this connection, teachers and supervisory officials may want to consider the amount of time that must be invested to make a new organizational plan work before attention can be turned to improving the curriculum and teaching within the new arrangement. It is all too easy to keep on diverting energies to the mechanics of one administrative innovation after another with the result that teachers have little time to tackle the problem of learning new ways to think and feel and behave in their instructional role.

3. The program will include opportunity for teachers to become more aware of developments in government and the economy at local community and other levels of society and will advance their understanding and use of the sciences, arts, and humanities in enhancing their own lives and those of the children.

4. The program will feature a variety of group approaches found useful in adult education—various kinds of formal courses, workshops, seminars, group discussions, role playing, lectures, demonstrations, field trips, investigations, analyses of performance, projects, written communication, recordings, films, television, and conference telephone.[4] With adaptation, the apprenticeship way of learning might be more widely used by experienced teachers. One example is summer student teaching for experienced teachers which the Du Page County, Illinois, schools conduct in cooperation with Northern Illinois University.

5. The program will feature high level teaching by competent instructors using the latest and most appropriate instructional tools. Some of this instruction will take place on college and university campuses and at national conferences where the "students of teaching" can have an opportunity to transcend the local situation, acquiring new ways of viewing the educational task and learning ways others are tackling problems. Some of the instruction will be offered in the local community with instructors secured from a variety of sources—institutions of higher education for specialists of many kinds, local or other school systems for teachers and instructional leaders with needed competence, the local or wider community for persons such as poets, businessmen, politicians, scientists, artists, and social workers.

6. The advantages of both single building groups and interschool or even regional groups will be sought in the program. The teachers of one building

[4] It is of interest to note that the in-service education program of Lansing, Michigan, is organized by the Adult Education Center in cooperation with the school administration and teaching staff.

have certain common and pressing problems, they can get together easily, once time is provided, and they have a principal near at hand to help in putting ideas into action. By cutting across building units, groups of teachers with very specialized needs can be brought together and furnished with expert help. Regional planning, such as is reported from Southern Fairfield County, Connecticut, makes it feasible to attract unusually competent consultants.

7. The program will include opportunity for individual study and skill building, possibly through some form of programmed instruction, for catching up with others in a group or for developing a special competence. The potential teaching value of the individual supervisory conference should not be overlooked here.

8. The program will be thoroughly evaluated to provide guidance for further planning.

9. The program will be related to but not synonymous with curriculum development.

Clarifying the Relationship of In-service Education Programs To Organized Programs of Curriculum Improvement

Two extreme positions seem worth avoiding. One is that all in-service teacher education should be expected to come about as teachers are involved more or less deeply in the development of a teacher's guide in one or more areas of the curriculum. The other is that in-service education means a planless accumulation of a certain number of college credits or local "in-service" credits until a specified minimum has been reached, with no particular relationship either to ongoing curriculum development projects or to general improvement of curriculum and instruction. Neither view will suffice to help teachers systematically obtain an ever better grasp of the subject matter they are teaching and an ever better control over teaching strategies suitable for the dual task of cognitive-affective development of children. Neither will provide the basis for an effective forward thrust of a teaching group. The program of in-service education will both feed, and feed on, efforts to develop and implement new curriculum plans.

In this connection let us look back for a moment to the questionnaire. Although respondents did not indicate an especially heavy emphasis on preparing teachers to teach ready-made programs imported from outside the school system, there is a real question whether each school system can or should start all work on each curriculum area from scratch. Certainly it is expected that instructional materials will be developed and disseminated from other sources than the local school system. Therefore, it seems that attention might be given in in-service education programs to adapting promising curriculum proposals and materials coming from reliable sources so that they may be combined with ongoing programs and woven into a useful whole by the local curriculum planners. The textbook selection process is only a small part of this operation.

But in-service education must be something more than all this. It must contribute to the continuing all-round development of persons, who happen to be teachers, that they may become more interesting, knowledgeable, and influential adults for children to associate with and may grow in ability to make strategic decisions about uses of time, space, and resources in directing the education of the children put in their charge.

In summary, a program of in-service education adequate for the demands on today's teachers will be carried on during paid periods of time when teachers are free from responsibility for children. The program will be coordinated by one or more competent individuals with time assigned for the task. Since the job to be done is one of adult education for a highly sophisticated, individual group-oriented profession, a well-designed plan of group opportunities for learning is needed to supplement continuing individual efforts at self-education. There is a considerable overlap with curriculum development activities but the two areas are not mutually inclusive. The program must be individualized to meet the great differences existing among teachers as well as among the children they teach. To continue to learn on the job is a professional necessity. This responsibility cannot be left to the chance of purely voluntary arrangements.

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The New Elementary School Teacher

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SOME ideas about what the new elementary school teacher will look like are beginning to take shape. These ideas, to be presented here in terms of three more or less competitive models, deserve our thoughtful study but must be understood to be incompletely developed. The reconceptualization of instruction from which the models derive will continue. But as we move from the 'sixties into the 'seventies we can be certain that as agreement comes on the functions to be ascribed to the new teacher, these will be defined more precisely and fully than in the past. In consequence, we shall need to have much in mind how best to prepare the new teacher and how better to support and serve him on the job.

Three Models of the Teacher

Let us first, then, examine the dimensions within which the functions of the new teacher are being currently tested or tried out. These dimensions may be considered in terms and models of the teacher as specialist, the teacher as executive, and the teacher as professional.

The Teacher as Specialist

The extent to which specialization of the teaching function should exist in the elementary school has long been a question for discussion and debate. The assumption has sometimes been made that the triumphs of the virtues of the self-contained classroom in the literature on elementary education after 1930 disposed of the matter and that reconsideration of the merits of specialization requires, first of all, an attack on these virtues. However, in practice the value of the specialist teacher has seldom been denied; the real problem has been one of establishing relationships between special and general teachers in order to provide the benefits of both advanced training and intimate association. In the past, our will to resolve the problem of balance was frequently weakened by our inability to finance an adequate staffing of our schools. But today we seem to be agreed that children deserve to have more specialized competencies available to them, and we are trying to supply these in several patterns that look promising to most of us.

Regular teacher. Some degree of specialization within the staff of a school organized largely as self-contained classrooms is to be expected as teachers exercise their right to choose among varied and increasingly available opportunities for further education in the content areas.

The uses of general teachers with specialized competencies are several. They may serve as consultants to the other teachers in their building, not only the new teachers, but also to older colleagues who seek help in presenting a puzzling concept in mathematics or enlarging the science component in a social studies unit. The school may organize a portion of the week so that children with particularized interests and talents may have some access to the specialists among the staff. Such teachers may also serve as contact or key teachers in system-wide undertakings, representing their buildings and carrying new ideas back to them.

Working together, a school staff may agree to encourage the development of varied competencies among its members and to seek complementary competencies in the selection of newcomers to the group.

Team member. The rapid development of the concept of team teaching during the past ten years reflects the concern we have for using specialist teachers more effectively. Team teaching arrangements provide ways that seem to maximize the availability of these teachers and yet ensure more unity in the life of the child, as well as more knowledge of and association with him by the teacher or teachers to whom he is assigned than may usually have been found under the departmentalized programs of the past.

An attempt to describe all the patterns that pass for team teaching today will have to be foregone. Yet we may note that in most situations in which the team functions well, the unit of children ceases to be 25 with a teacher ratio of 1 to 25 and becomes a larger unit—one, let us say, of 100, with a teacher ratio of 4 to 100 (or, in the most richly staffed situations, of 5, 6, or 7 to 100).

The devices by which a multiple staff plans for this larger unit to provide for individual and group needs; for common, remedial, and enrichment experiences; and for sustained as well as periodic contacts with children—these deserve our closest attention and analysis.

Special teacher. Historically, the elementary school with self-contained classrooms has had available the services of teachers from some of the more highly specialized fields—art, music, physical education, homemaking, and industrial arts.

Plans for the use of these specialists have differed, of course, in terms of grade level, competency of the regular teacher, curriculum outlook, space and facilities, and the like.

As a reflection of current public expectations, the ranks of the special teachers as such have been augmented by the addition of teachers in modern languages and sometimes science and mathematics. Occasionally the addition has come via television.

Auxiliary teacher. Similarly, auxiliary teachers with specialized competencies have long been available in elementary schools. Remedial reading teachers have been provided for thirty years or more by some school systems. In the early and mid 'fifties, numerous schools set up enrichment opportunities for gifted or talented children as adjuncts to the regular program.

Today, often under provisions of the Elementary and Secondary Education Act, school systems are adding many remedial and enrichment teachers to work with children from disadvantaged backgrounds. Although we may feel that the call for specialists in remedial reading, remedial mathematics, and language development has outrun the supply and that the relationship of specialized to regular teachers needs to be considered more carefully, we can agree that the role of the auxiliary teacher specialist is being newly appreciated and supported.

The most remarkable fact about the growth in the number of such teachers may well be the assignment of the auxiliary person to a new base of a few teachers, in what is sometimes termed a "plus"-teacher relationship.

Resource teacher. Another type of specialist teacher being currently added to the staffing mix in greater numbers is the resource teacher who serves as a consultant to the regular teacher.

The pattern of relationship is not new, but the role sometimes may be. When school systems were going through the period of implementing the new mathematics program, it was not unusual for them to release a teacher considered to be more expert than the others to serve on call as a counselor to his colleagues. The practice being pursued by some districts today of piloting a new venture with a few teachers and then providing for its gradual extension each year to additional classrooms has brought pioneer teachers out of their classrooms to help others in getting under way with i/t/a or one of the other new beginning reading programs.

The resource teacher is generally regarded as a helper whose value comes from competence out of the ordinary, a colleague without more authority than comes from such competence.

The elementary school teacher as a specialist of one kind or another is thus becoming well-developed as a model for the new teacher of children. The variety of roles and relationships being tested out as well as the growth of new concepts of teacher-pupil ratio distinguish our present from our earlier thinking about the teacher specialist. If or as this model prevails, we will certainly need to address ourselves freshly to the preparation of teachers; most of our present preservice programs are obviously not geared to this model.

The Teacher as Executive

What are the essential functions of the teacher of children? We must return to this question if we are to understand the developing model of the teacher as an executive. The nature of teaching is currently under study as it has not been for half a century. This scrutiny includes close attention to the problems of planning for learning in an environment freshly rich in resources and personnel, in which the teacher may be confronted with new responsibilities and attendant new roles.

Manager of resources. Several aspects of the current educational scene work toward the definition of the teacher's functions as those of manager of resources.

The union of scientific analysis of content and scientific preparation of teaching materials promises to provide us with an increasing array of devices that will enable learners to enter some kind of self-regulating encounter with what is to be learned. Diagnosis and evaluation, as a result, will become even more important teaching tasks, while presenting content through dialoguing with individuals and groups will be less important, at least in those parts of the curriculum that respond to the arts of educational technology.

The very rapid growth of materials centers in elementary schools promises to move the base of more teaching from the textbook to a range of resources. Organizing for the use of such collections calls for skills that may not have been so widely needed in the past.

The emphasis on the need for more opportunities for independent study and personal inquiry can be added to the picture to complicate the prospect that the teacher of tomorrow will need to be a kind of manager of the learning environment, expert in selecting and assembling resources of many kinds, assessing needs, and setting up and supervising situations maximizing the time spent by children with the newly varied materials for study.

Team leader. The executive demands on the leader of a teaching team or the chairman of a cooperative teaching venture are plainly apparent.

Because of the great variety of ways in which teaching teams are organized, it is difficult to spell out the duties required of leaders. In the prototype found in the early literature on team teaching, the leader was identified as one selected because of his competence as a master teacher and rewarded by extra pay as well as charged with additional responsibility. One of the justifications of the team structure was that it made it possible to retain in teaching situations persons who might otherwise be attracted to administration by higher pay. Recently a midwestern state superintendent of public instruction has proposed that master teachers carrying executive functions of this sort be paid from $12,000 to $15,000.

More realistically perhaps, the team or cooperating teaching unit has to develop among its members the skills of planning and leadership needed in order to function effectively, skills that have not in the past been included in programs of teacher preparation.

Coordinator of aides and auxiliaries. The regular teacher in many elementary schools now has so many persons available to help him that he can be thought of as having to function in part as an executive.

The number of teacher's aides, auxiliary teachers in the school, and ancillary personnel available on call forces the teacher to plan for and with his own team, so to speak. In a report of one prekindergarten program, the role of the teacher, who has two fulltime aides to assist with 22 pupils, is defined as that of "a coordinator and supervisor as well as a teacher," charged with organizing and planning "activities for all the adults working in the program." For this situation, the adults include many persons representing health and social services as well as the parents of the children.

A report from an inner-city school program of a sizeable school district lists these persons as available full or part time to the regular teacher: enrichment teacher, reading improvement teacher, mathematics improvement teacher, elementary counselor, nurse, physician, dentist, visiting teacher, psychologist, and persons staffing an after-school study center. General and special consultants are also available from a regional service center.

As we are all aware, these are not unusual situations; they are cited simply as samples. In some schools the problem of handling additional personnel is less familiar than it long has been in other more favored schools or school systems. The regular teacher who is to use the full staff provided for him may well need to think of himself as coordinator or supervisor and to be educated specifically for his executive duties.

Again, the model of the new elementary school teacher as an executive of sorts arises in part out of the proliferation of resources and personnel and also perhaps from the effort to analyze the variety of functions or roles subsumed in the concept of teaching and to assign them more directly to cooperating staff members, as found in the classroom itself, in team relationships, or in auxiliary and ancillary relationships. If the prime teacher is to be thought of as carrying these larger responsibilities of manager, organizer, leader, coordinator, and supervisor, then he may well require new kinds of experiences in his preservice education.

The Teacher as Professional

Another model for the new elementary school teacher is to be found in the definition of the teacher as a fully functioning professional person. The model is based largely on the historic conception of the professional as one who is expected to make use of new knowledge on his own terms and who is held to be obligated to contribute to new knowledge as well as he can. This conception has not been widely accepted in the past as appropriate to the functioning of the precollegiate teacher. However, there are indications that it may now be regarded as reasonable and desirable to think of the teacher of children and youth as increasingly self-directing and independent. We may examine this prospect from several points of view.

Curriculum maker. The teacher has the ultimate responsibility for the development of curriculum as he works with learners in his classroom.

This generalization, long familiar in the literature on curriculum development, has been given new meaning by the experience of the national curriculum projects of the past ten years. A recent book reporting on some of these is entitled, *Curriculum Improvement and Innovation: A Partnership of Students, School Teachers, and Research Scholars* (edited by W. T. Martin and D. C. Pinck; Cambridge, Massachusetts: Robert Bentley, Inc., 1966). The focus in the implementation of the new programs has been primarily on teacher reeducation; principals and supervisors have sometimes had to find out what was going on from their teachers already inducted into a new program by its sponsor.

In most of the new programs, the original design or selection of curriculum content has been seen as the province of the scholar. But there has been a new importance assigned to the function of the teacher as the person who must test the program for teachability. In addition, the emphasis on the reeducation of the teacher to handle new content has highlighted again his role as the ultimate curriculum maker and has given rise to the mammoth federal programs of subsidized teacher re-education.

The renewed recognition of the importance of the teacher in developing the curriculum may cause us to review the nature of his preparation and also the kinds of services we provide him after employment.

Innovator. The teacher can create new knowledge through what he does in his classroom, in his own personal laboratory for professional learning.

We have granted this possibility in the past. In the early 'fifties, we attempted to combine action research and in-service education. But we are newly aware of the opportunity and indeed the obligation of teachers to engage in innovative ventures. We welcome teachers who offer to try out something so that we all may study the results. Perhaps we ask several teachers to test a variety of new approaches to science. We may formalize a situation by designing an experimental set-up in which competing programs for the teaching of beginning reading are compared. Or we may organize for the development of a new oral language program that we hope will be better than anything that has come to our attention.

The growth or reorientation of research services in the public schools reflects the urgency we all feel to become more competent in testing, experimenting with, and developing new ideas. The role of the teacher as innovator is likely to be further supported as the Research and Development Centers and the Regional Educational Laboratories begin to supply us with their output.

What does the teacher as innovator need to know? This is a question to which all of us may need to address ourselves.

Specialist in methodology. The unique province of the teacher is teaching; his professional capital is his competence in methodology.

The validity of this sensible contention is currently buttressed by theorization and research into the nature of teaching. The revival of interest in methodology is providing new dignity to teaching as teaching. At present, this interest ranges from analysis of the verbal behavior of teachers to the identification of the stages of concept development through which the teacher must guide learners. In the largest sense, the new concern for methodology encompasses many aspects of educational technology; it accounts for the revival of interest in the work of Maria Montessori; it is reflected in the proposals for doing more with inquiry, discovery, and independent study.

In short, a new content of methodology is being developed. The question for us may be how to help prospective and experienced teachers to advance their knowledge of this content.

The model of the teacher as a professional has these several components. Much of what is behind the model has to do with the rise in status of precollegiate teachers, particularly elementary school teachers, from the subordination that may have been appropriate when teachers were poorly prepared to a new level of responsibility more nearly analogous with that generally enjoyed by their college colleagues. The essence of professionalism in teaching is independence in decision-making about what is taught and how. For the elementary school teacher so to function, what must he know and how should he be supported in his teaching situation?

What the New Teacher Must Know

Each of the three models of the new teacher is an attempt to put the broadened dimensions within which the precollegiate teacher is now operating into a set of ordered relationships. Each model attempts to account for some, if not all, of the same dimensions. Each certainly supposes that in the program to prepare the new teacher there must be new learnings.

In thinking about the changes that will be needed in teacher preparation, we could examine in turn the learnings required by each model. But it will be more economical and also safer, insofar as the survival of these particular models may be perceived as uncertain, to try to identify a number of areas in which new learnings would seem to be required by one or more of the models. On this base, we may then wish to project some notions about the impact that the addition of the new learnings will have upon the shape of the formal teacher education program. When we have done this, we may turn our attention to changes in the on-the-job conditions and services that will be needed to support the new teacher more adequately.

Areas of Needed Learning

The areas to follow nominate themselves as those in which the new elementary school teacher will be expected to become more proficient.

Subject specialization. All teachers may be expected to bring to teaching a broader general education than in former years. Such preparation will ensure a better base for developing competency in the range of subject areas now included in the curriculum for children and still thought of by and large as the responsibility of the regular teacher. Many teachers will be encouraged to develop a special competency in one or more of the subject areas. Some teachers will be advised to develop a high level of competency in a single field.

These generalizations would seem to be justified from our review of the new operational dimensions of the elementary school teacher. They concern the relationship of the preprofessional to the professional program. They also suggest the restructuring of the professional program at both the undergraduate and graduate levels.

That the beginning teacher entering the elementary classroom is still generally undereducated as a person in his own right, in the most literal sense, is all too clear. Contact with the academic areas in college has been inadequate to provide the background for teaching today's children. Moreover, one of the major problems in educating the experienced teacher as a specialist is the absence from his earlier education of anything much to build on. He has been shunted into professional education so early in his college career that he comes back unable to reenter the content sequences except at the undergraduate level. The revival of interest in tailoring special courses in the academic areas for experienced teachers, outmoded as it may be historically, arises from this lack as revealed by the needs of the new federally subsidized programs intended to prepare elementary school specialists.

Curriculum and instruction. Teachers may be expected to possess a framework for thinking about curriculum design and development large enough to provide a secure base for exploring new possibilities of improving experiences for children. They need an understanding of instruction that affords a theoretical structure identifying and relating the varied tasks or acts of teaching and that accounts for the function of many kinds of materials and resources in teaching.

We may assume that today's teacher, the experienced teacher, if he has gained such a framework and such a structure, has done so through graduate study. Now the question becomes whether the teacher in preparation, in terms of his probable destiny as executive and professional, needs an earlier start in building a firm foundation in curriculum and instruction. With an affirmative answer, the problem then becomes one of deciding how to include more attention to these areas in his professional undergraduate education.

Staff relationships. Teachers may need to know more than they used to be expected to know about how to work with their immediate colleagues and also how to use effectively an increasing array of persons and services provided for the better education of children.

The theme of the current project of the National Commission on Teacher Education and Professional Standards is "The Teacher and His Staff." The range of staff relationships immediately apparent in the model of the teacher as executive and those that we know exist under the model of the teacher as specialist may be redefined as we alter and improve our model of the new elementary school teacher. However, there has already long existed an agreement that the teacher needs to know his way around better in an institutional setting. The movement in collective negotiation expands the sense of need. What understandings most deserve attention in teacher preparation remain to be determined, but here is a relatively new component for which we must find a place.

Research and experimentation. Teachers who are to occupy a role as relatively independent professional persons may be expected to need the competencies required for using and contributing to new knowledge. As well as those drawn from the broader base in curriculum and instruction already discussed, these competencies include reasonably well-developed skills in testing out, experimenting with, and developing new ideas.

Such competencies can scarcely be expected to have been very well-developed in any undergraduate program of the past; it may be equally unlikely that there will be time available in the future to establish a high level of performance in research and experimentation prior to the graduate years. However, the prospect is that an effort will be made in many programs to set a better preservice foundation in research and experimentation than has existed heretofore and that the graduate education of elementary school teachers will include much more attention to this area than it has in the past.

Professional behavior in general. The new teacher may be expected to need help in many aspects of learning how to behave as a more fully professional person.

What these aspects are, the attributes of behavior that will enable an elementary school teacher to operate more independently in using new knowledge and more successfully in contributing to it, remains to be spelled out in the minds of us all. Yet we can scarcely doubt that as they are spelled out the new concepts of professional selfhood will be incorporated in the program of teacher education.

Here, then, are some of the areas that would seem likely to loom larger in the education of the new teacher. What impact may this expansion of competence be expected to have on our programs of teacher education?

The Education of the New Teacher

Changes in the content of programs for the education of the new elementary school teacher have been identified, however loosely, in the preceding section of this paper. What is of concern here is the reshaping of the program in terms of its segments—the preprofessional, the undergraduate professional, and the graduate. If the changes in content are to be accommodated, changes would seem to be required in the time allocations and proportionate relationships of these segments.

Preprofessional education. At a minimum, it would seem desirable to clear the first two years of college for the full-time general education of prospective elementary school teachers. This minimum provision presupposes, of course, that there will be present in the two-year block a carefully thought out rationale for balance among mathematics and the sciences, the social studies, and the humanities. Such a balanced base is required for the minimal functioning of today's teacher of children.

A strong case can be made for extending this base by a third year of study prior to professional education or the reservation in the upper division of the equivalent of half-time for extension of competency in one or more subject areas. The recent specification of areas of specialization for elementary teachers in California and Texas is indicative of public support in this direction.

Undergraduate professional education. A larger place for preprofessional education would seem to posit a cutback in the amount of time for professional education. Certainly, in these times, if space for undergraduate education cannot be expanded, then the time presently allocated to the professional education in some programs will need to be reduced to allow room for an adequate general education base.

Where this cutback occurs, it may be anticipated that it will be in familiar directions. One is the review of the preparatory courses we have included in the past in order to beef up background in mathematics, the fine arts, the practical arts, and some other neglected areas. A broader general education base should change the picture of need.

Another familiar focus will be the numerous courses in subject methods to determine whether they can be coordinated or combined or perhaps replaced by general courses. This time around, the recent renewal of interest in methodology may provide us with new content to consider. Here also a broader general education base would seem to provide something additional to include in our thinking.

But, of course, if we take seriously the prediction that a broader professional preparation is to be demanded of the new elementary teacher, with more knowledge of curriculum as well as instruction and a sounder beginning in research and experimentation, then we may wonder whether cutting back will answer. Of the fact that we will need to review and revise our present undergraduate professional segment as the general education segment is enlarged, there can be little doubt. Yet bringing the present professional courses up to date and cutting the overlap with general education may not be enough. How do we make room for a broader base for continued professional education?

Graduate education. The reshaping of graduate education for the new elementary school teacher will relate very closely to the expansion of the general education base in the undergraduate years. This much seems clear. The development of more opportunity for subject specialization is at stake. To repeat, the present effort to meet the need for specialist teachers at the graduate level is encountering difficulty because there has been so little to build on in their past education.

We must acknowledge as we try to educate for the new teacher as specialist, the present need for a larger graduate education time block than the customary year in the master's program. Some of the federally subsidized programs to develop specialists are being framed to provide two years of graduate education.

What we may need to do more systematically is to lay out in anticipation a much more comprehensive program of advanced education for the new elementary teacher. The unit of one additional year seems totally inadequate, just as the unit of four years no longer seems to suffice for an adequate undergraduate preparation. In both instances we may need to move toward a large block of time, five years to be provided one way or another for the initial preparation and perhaps three more for advanced education.

Some colleges now offer certificates of proficiency for post-master's programs. This way of recognizing the need for further training will doubtless continue to grow. However, the prospect of designing doctoral programs for elementary school teachers is already upon us. The new models of the teacher as specialist, executive, and professional point the way. School systems are beginning to include truly substantial differentials in their salary schedules for possession of the doctorate. While this response to the changing status of the teacher may seem more immediately related to what is happening at the secondary level, the rewards for advanced education will be quickly appreciated also by elementary teachers.

The dispersal of supervisory functions among elementary school teachers is already bringing teachers into advanced programs of curriculum and instruction to join the number of specialist teachers seeking advanced education in the content areas. The expansion of graduate education in scope as well as time can be taken for granted.

Many colleges of education are studying ways to reshape their undergraduate and graduate programs to meet the need for a new kind of elementary school teacher. At the same time, public schools must review the adequacy of their provision of conditions and services to support the teacher in performing at a new professional level.

Support of the New Teacher at Work

That the new elementary school teacher will require certain kinds of different or altered conditions and services to function effectively on the job would seem obvious. Just what these are to look like will depend upon the survival and development of the competing models of the new teacher. However, we may be able to anticipate some of the conditions and services that would seem to be more or less common to the functioning of the new teacher, whether seen as specialist, executive, or professional, and also to define several problems or issues that face us in providing what is needed.

Needed Conditions and Services

The new teacher, like the old, will operate in an institutional setting. The challenge is to strengthen that setting so that it supports the teacher more adequately.

Time for study and planning. Time is needed during the elementary teacher's day, week, and year for personal as well as group study and planning.

We have long since granted the truth of this contention. Sometimes we have tried to provide time "away from children," as we still rather hesitantly refer to the periods set aside for study and planning, by allowing the regular teacher to take a rest break when the teacher of music or physical education turns up. Or we may have dismissed the children at 1:30 on the last Friday afternoon of every month, or even extended the contract to provide a week on duty after school closes or before it opens.

However, these practices do not take care of the teacher's need to have time on the job to prepare for his own teaching, to review new materials and keep track of new curriculum developments, to confer with the speech therapist or counselor or parent on what can be or is being done for Jimmy or Janice, to plan with aides and teacher colleagues for the next day or the next week, and to work with others on the faculty to evaluate and replan the program of the school as a whole.

Doubtless there are new approaches already being developed to provide time for study and planning as a legitimate and, indeed, necessary part of the regular schedule. These will need support and extension as we provide the time basis of more adequate professional functioning in the elementary school.

Specialized local services. A rich local environment of specialized professional services is needed for the support of the new elementary school teacher.

In some situations, such services have been provided more adequately than in others. But if the new teacher everywhere is to be expected to assume new roles and responsibilities, then there must be much more help close at hand, either in the district or perhaps in some new institutional arrangement such as can be found in the multi-district service centers developed under Title III of the Elementary and Secondary Education Act or in the intermediate units that deploy state resources.

These needed services include an adequately staffed professional library, consultants in the subject areas who are truly expert in their fields, general supervisors who know methodology and who can also advise on the development of needed skills of interpersonal and group relations, and specialists in research and experimentation who possess among their competencies the know-how of securing outside subsidy for the strengthening of local innovativeness.

Again, such specialized services are already available to some teachers; the need is to make sure that they are available to all teachers.

Access to broader resources. Relationships need to be established between teachers on the job and the broader resources of professional education available beyond the local district and the adjacent neighborhood.

The new teacher who is to function with an increasing amount of personal authority and self-direction must not be dependent only on what is provided in his own environment. The basis of professionalism is all the knowledge of the field. Access must be open to the best regional and national resources—persons to serve as advisers on the local scene; conferences and workshops to be attended; school systems ahead of the game to be visited; and Research and Development Centers, Regional Educational Laboratories, and Educational Research Information Centers to be related to or consulted.

The financing of wider teacher access to such resources may trouble us at the moment. The financing, however, will follow—indeed it is already following—upon our own resolution to broaden the base of our general professional operation to include the teaching staff as a whole.

This treatment of the conditions and services that will be required to support the new elementary school teacher is fragmentary, and what has been presented has been but partially defined. Yet perhaps enough has been said to indicate the necessity of reviewing how we now support the teacher and the need for beginning to plan how to do so much more effectively.

Problems and Issues

Providing better support for the new elementary school teacher will bring with it several problems and issues that will require a considerable degree of openness to rethink and a good deal of ingenuity to resolve. The brief paragraphs to follow must be regarded merely as notes on the nature of these questions.

New basis for in-service education. Provisions for the continuing professional growth of teachers must be built into the institutional structure in which all teachers function.

Depending on the seeking out of opportunities for their further education by individual teachers and encouraging them to do so by progress barriers or token rewards written into contracts would seem inadequate to the newly recognized need to ensure the high level functioning of all members of the teaching staff.

The problem is how to build provisions for study into the regular work schedule of the staff.

Deployment of authority. The development of greater expertness and self-direction among teachers requires the reconceptualization of relationships in the school setting.

Some functions and responsibilities of official leadership have been and more will be dispersed among teachers as they become newly professional. The negotiation movement is also working toward an increasingly independent status for the precollegiate teacher, one that will be defined rather precisely in legal terms.

How to help shape this deployment of authority is something we need to ponder in the broadest possible terms.

Emergence of new leadership patterns. The deployment of professional authority across a broader base in the school calls for the development of new leadership patterns.

Leadership as a function of office may need to be reassessed in terms of the changing perspective. The redefinition of the role of supervisors as consultants, long since accomplished, may point the way. What the dimensions of leadership in the teaching force are to be is perplexing to many of us. The nature of the principalship in a school with fully functioning professional teachers has also yet to be thought through.

The redefinition of leadership in terms of functions other than office may be a first step to providing ourselves with order in the puzzling problem of reconciling professional and institutional imperatives.

Changes are needed in the conditions and services provided to support adequately the new elementary school teacher on the job. Making these changes will require us to revise some of our old views and invent some fresh ways of working together as a total school staff.

In summary, out of the educational reconstruction of the 'sixties is coming the conception of a new elementary school teacher. This new teacher will need to know more than did the old and thus will require a different kind of education. He will also need different conditions and services on the job in order to function effectively.

Several models of the new teacher are currently under conceptualization. The teacher as a specialist is one model, with a variety of possibilities in the picture—the regular teacher as a specialist for some functions, the team member, the special teacher as such, the auxiliary teacher, and the resource teacher. Another model is the teacher as executive—a manager of resources, a team leader, a coordinator of aides and auxiliaries. A third model is the new teacher as a fully functioning professional, who is thought of as curriculum maker, innovator, or perhaps a specialist in methodology.

Whatever the ultimate model for the new teacher, more opportunities must be available in undergraduate and graduate education to develop specialization, to gain a better grounding in curriculum and instruction, to consider problems of and develop skills in staff relationships, to become more competent in research and experimentation, and in general to learn how to behave as an increasingly independent professional person. Consequently we may anticipate that teacher education programs will attempt to provide for these needed learnings by broadening the general education base, strengthening the professional segment at the undergraduate level, and expanding and extending the program of advanced education for teachers.

Similarly, school systems must review the adequacy of their provisions for supporting the new teacher. We may anticipate that more time will be provided on the job for study and planning, that new kinds of specialized services will be available, and that access to broader resources for professional growth will be ensured. We know that to offer such conditions and services, a new look will need to be taken at the present shape of in-service education and efforts made to restructure present patterns of authority and leadership.

The new elementary school teacher will be harder to prepare and possibly harder to live with. He will demand more of us before he gets on the job and after. Yet we cannot deny the teacher in prospect the opportunities for experiences he needs to become as professional as possible or try to fit him into job conditions unworthy of him or serve him in ways inappropriate to a new level of competency.

Those of us charged with responsibilities in teacher education and those with responsibilities in local school leadership have much to do if we are to make it possible, in turn, for the new elementary teacher to do much more. Yet the promised outcome of our joint efforts is a superior education for tomorrow's children. This promise should be enough to inspire us to do what must be done.

PART III

New Content and Curriculum Designs

Social Studies in the Elementary School: A Case Example of New Content

DOROTHY M. FRASER

SOCIAL studies is a field in transition at both elementary and secondary school levels. Between 40 and 60 special projects could be cited, with the number depending on the criteria used to establish the list.[1] Many of the projects are focused on the secondary level exclusively, it is true, but a considerable number deal with the elementary grades; even those that are restricted to the high school years have implications for the elementary school. These proposed revisions make the social studies curriculum an interesting, though perhaps confusing, case example of how new content is being developed in the elementary school program today.

Among the projects that deal directly with elementary social studies, there is great variety. Some are preparing comprehensive programs, from the kindergarten through grade 12—notably, the University of Minnesota Project Social Studies Curriculum Center and the Greater Cleveland Social Studies Project. Others, such as the social studies project of Educational Services, Inc., and the Providence (Rhode Island) Social Studies Curriculum Study, are developing units or courses for various parts of the elementary program, drawing on multiple disciplines. Still others are drawing on a single discipline, as is the case in the economics programs of Lawrence Senesh (the Elkhart, Indiana, Experiment in Economic Education), the University of Chicago's Industrial Relations Center, and the anthropology project at the University of Georgia. There are also several projects that are focused on broad themes or problem areas—for example, Michaelis' project on "Preparation of Teaching Guides and Materials on Asian Countries, Grades K-12" (University of California) and the Tufts University project on cultural diversity and intergroup relations. As we shall see, there are elements of convergence as well as divergence in the proposals and materials coming from these varied approaches and projects.

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[1] For information about the various social studies projects, including those mentioned in this paper, see: Edwin Fenton and John M. Good. "Project Social Studies: A Progress Report." *Social Education* 29: 206-26; Dorothy M. Fraser. "Status and Expectations of Current Research and Development Projects." *Social Education* 29: 421-34; and John U. Michaelis. "Social Studies." In: *New Curriculum Developments*. G. Unruh, editor. Washington, D. C.: Association for Supervision and Curriculum Development, 1965. pp. 68-77.

The special projects, however, represent only one part of the activity that is bringing change in the content of the elementary social studies program. By contrast to the revisions of mathematics and science, in which areas the projects have led the schools, a great deal of social studies revision is going on in school systems that are not waiting for results from the experimental projects. In California and Wisconsin, new state frameworks for social studies that were developed in the early 'sixties, before the wave of special projects in the field had gained much momentum, are being implemented by local school systems.[2] In many other parts of the country, school systems have revisions well under way. While the preliminary reports of the experimental projects and, in a few cases, the materials they have released are undoubtedly influencing the directions of change in the schools, the situation seems to be that schools and experimental projects are drawing from the same sources and employing many of the same approaches to curriculum change.

Against this background, let us consider the new content that is coming into elementary social studies. In order to ensure that the treatment here is generalizable as a case example of how new content is entering the elementary school, I have organized this discussion into three parts: first, an analysis of current developments in elementary social studies; second, a projection of probable major agreements on new content; and finally, attention to the larger context in which new content for elementary social studies is chosen, with lessons from experience in other fields.

Analysis of Developments in Elementary Social Studies

As a basis for analyzing developments in elementary social studies, let us look briefly at three comprehensive programs. I have selected as examples one of the special project proposals, one public school program that diverges considerably from traditional programs, and one public school curriculum that might be described as a transitional program. Other examples could have been used, of course, such as California's Contra Costa County program or the Greater Cleveland Social Studies Project. The three I have selected are perhaps not as well known in detail as others for which published materials have been available for some time.

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[2] *Social Studies Framework for the Public Schools of California.* Sacramento: California State Department of Education, 1962; *A Conceptual Framework for the Social Studies in Wisconsin Schools.* Madison: Wisconsin Department of Public Instruction, 1964.

Program of the University of Minnesota Project Social Studies Center

The University of Minnesota curriculum for the elementary school seems, at first glance, to follow the expanding environment plan for selecting and placing content (see Chart 1). The grade-level themes show successive study of family, community, regions, and nation.

When the unit titles are examined, however, the content that is used is significantly different from conventional programs. Kindergarteners become acquainted with the globe on which they live and are introduced to concepts of conservation, cultural diversity, and change. First- and second-graders study families, but the families they study are widely distributed in space and in time. These families are selected to illustrate cultural variations and similarities and to demonstrate culture change. Most of the content must be considered to be "new."

Third- and fourth-graders study communities, but again the communities are widely distributed in space and time and represent a considerable change in content as compared with conventional programs. Study of political institutions begins specifically in grade 3, and economic concepts and principles are emphasized in grade 4. In the regional studies of grade 5, case studies of limited site locations are combined with brief overviews, replacing the general historical-geographic survey of the western hemisphere that has frequently been found in this grade. Some of these are sequent-occupance case studies, others are historical-geographic in emphasis.

In grade 6 we find the first cycle of United States history planned to articulate with a second cycle placed in grade 10. (Note that this program reduces by one year the time spent on U.S. history as such.) The five chronological units in grade 6 carry the national history to 1876, emphasizing culture contact, culture change, and cultural continuity as people carry their culture to new places. This treatment is different from the regional studies of the United States in grade 5, where the stress is on changing use of the same environment at specific sites.

Chart 1. Content of University of Minnesota
Elementary Social Studies Program [*]

Grade and Theme	*Units*
K. Earth as Home of Man	**1. Overview: Earth as the Home of Man 2. Our Global Earth 3. A Home of Varied Resources 4. A World of Many Peoples 5. Man Changes the Earth**
I. Families Around the World, I	**1. Chippewa Family (or Local Tribe) 2. Hopi Family (Change over Time) 3. Quechua Family, Peru 4. Japanese Family**
II. Families Around the World, II	**1. Boston Family, Early 18th Century 2. Soviet Family, Urban Moscow 3. Hausa Family, Nigeria 4. Kibbutz Family, Israel 5. Culminating Period: Focus on Concepts—Culture, Social Processes, Social Organization—in Relation to Family Life**
III. Communities Around the World, I	**1. Urban and Rural Communities: A Contrast (Local Community Included) 2. Early California Mining Camp: An American Frontier Community 3. Paris Community 4. Manu Community: 1930's, 1950's**
IV. Communities Around the World, II	**1. Our Own Community 2. Community in Soviet Russia 3. Tobriand Islander Community 4. Indian Village South of Himalayas**
V. Regional Studies: United States, Canada, Latin America	**1. The United States A. Overview: Development of System of Regions B. Sequent Occupance Case Studies (Local Area plus Six Others) 2. Canada A. Overview: Development of System of Regions B. Historical-Geographic Case Studies of Six Regions 3. Latin America A. Overview: Discussion of Various Ways of Regionalizing B. Historical-Geographic Case Studies of Four Regions 4. Case Study, One Region, Africa**
VI. Formation of American Society	**Five Chronological Units to 1876, with Emphasis on Culture, Culture Contact, Culture Change, and Cultural Continuity**

[*] Source: *Progress Report No. 2.* Minneapolis: University of Minnesota Project Social Studies Curriculum Center, November 1965.

The Minnesota plan may be characterized as interdisciplinary in organization but with a major focus on a particular discipline in each school year (see Chart 2).

Chart 2. Disciplines Emphasized in Minnesota Elementary Social Studies Program [*]

Grade and Theme	*Major Focus*	*Other Disciplines*
K. Earth as Home of Man	Geography	Anthropology
I. Families Around the World, I	Anthropology	History, Sociology, Economics
II. Families Around the World, II	Anthropology	History, Sociology, Economics
III. Communities Around the World, I	Anthropology	History, Sociology, Economics, Political Science
IV. Communities Around the World, II	Economics	Geography, Anthropology
V. Regional Studies: U. S., Canada, Latin America	Geography**	History, Anthropology, Sociology, Economics
VI. Formation of American Society	History**	Geography, Economics, Anthropology, Political Science, Sociology
VII. Man and Culture	Sociology,** Social Psychology	Anthropology, Political Science
VIII. Our Political System	Political Science**	History, Geography, Anthropology, Sociology, Economics

[*] Source: *Progress Report No. 2*. Minneapolis: University of Minnesota Project Social Studies Curriculum Center, November 1965.

[**] Primary source of content for the grade, with systematic treatment.

Programs of the Lexington, Massachusetts, Public Schools

Our second example comes from Lexington, Massachusetts, where a new design for elementary social studies has been in development for several years. A look at grade-level themes shows that Lexington has discarded the expanding environment plan for establishing scope and sequence for the curriculum (see Chart 3). The guide for grades 1-2 explicitly rejects the idea that children must move from the known to the unknown:

> Most lessons herein proceed from the unknown and unusual to the familiar by the use of questions, forcing the child to perceive relationships almost before he is aware that he is thinking. . . . Never is the child asked to discuss the too-familiar, the obvious, without being previously exposed to a situation designed to stimulate curiosity and direct his attention.[3]

[3] *Social Studies Guide, Grades* 1-2. Lexington, Massachusetts: Lexington Public Schools, 1965.

Chart 3. Content of Lexington, Massachusetts, Elementary Social Studies Program *

Grade and Themes	*Units*
I. Man Has Varied Ways of Meeting Similar Needs	Shelter, Celebrations, Work, Schools
II. Man Has Adapted to a Variety of Natural Habitats	Pioneer, Navaho, Eskimo, Polynesian
III. Man Finds Ways to Control His Relationships to His Environment	Mining, the Oceans. Water Control, Agriculture
IV. Technology Has Changed the Production and Distribution of Goods and Services and Has Created New Opportunities and Problems for Human Society	Food and Population, Power and Technology, Cities, Trade (Lexington)
V. There Is a Variety of Patterns of Development and Interdependence Within and Among Nations	Migration, Exploration, Revolutions, Cultural Development
VI. Man's Acts of Inquiry, Creativity, and Expression Evolve from and Influence His Culture	Law and Government, Archaeology, Architecture, Writing Systems

* Source: *Teaching Social Studies, Grades 1-12.* Lexington, Massachusetts: Lexington Public Schools, 1965.

Scope and sequence have been established by selecting for each grade level a theme, stated as a generalization, that is considered to be significant for the child's understanding of his own and other cultures and that is thought to be appropriate to the mental maturity and needs of the pupils. Units to develop the themes are then proposed. Each unit is studied in some depth, with emphasis on pupils' developing their own generalizations. In fact, no more than five units are to be undertaken in any school year. "While five is no magic number," state the authors of the basic guide for the program, "we believe at present that teaching more than that number of Resource Units in a year weakens the quality of inquiry and research we wish to emphasize." [4]

In each unit, pertinent content is drawn from the various social sciences and organized on an interdisciplinary basis. Anthropology, economics, political science, sociology, and social psychology, as well as history and geography, contribute substantially to the content studied by the pupils. In the secondary school years of the Lexington program, the courses are organized as separate subjects, broadly interpreted.

[4] *Teaching Social Studies, Grades 1-12.* Lexington, Massachusetts: Lexington Public Schools, 1965.

Program of the Madison, Wisconsin, Public Schools

Our third example, which is offered as a "transitional" program, comes from Madison, Wisconsin. Built on the state framework that was developed through cooperative efforts of the State Department of Education and the University of Wisconsin, the Madison program presents some new approaches, content, and emphases within the framework of the expanding environment plan.

Study of the grade-level themes and units for each year reveals the ways in which the varied disciplines are drawn upon (see Chart 4). Sociology is considered a "key discipline" for the kindergarten and lower primary grades and appears again in grades 4 and 6. Economic concepts are to be emphasized in treating each grade-level theme, grades 1 through 6. Political science concepts are to be introduced in grade 2, in connection with community study, and to be stressed also in grades 5 and 6. Materials from anthropology appear in grades 4 and 6, being treated quite systematically in the latter. History and geography are drawn upon at each grade level beginning with grade 3.

Common Elements of New Programs

What common elements can we identify in these and other new social studies programs that are being developed by the special projects and in the schools? In generalizing about these developments, I shall feel free to go beyond the specific examples which have been presented here.

1. New Content from the Behavioral Sciences

Obviously, a great deal of new content is being drawn into the elementary program from the behavioral sciences. Materials from anthropology and sociology are prominent in the primary years. Through comparative study of families and communities "around the world" and in different time periods, young children are introduced, at a simple level, to such concepts as culture, culture change, diversities and similarities among cultures, the impact of culture on personality, role, role expectations, and conflict among roles.

Economics is also being drawn upon heavily in many, though not all, of the new primary grade programs. Where economics is stressed, aspects of family and community life are used as vehicles to help children begin the development of such concepts as "economizing" (i.e., the conflict between unlimited wants and limited resources), production, consumption, specialization of labor, and the flow of goods and services.

Chart 4. Content of Madison, Wisconsin, Elementary Social Studies Program [*]

Grade and Theme	*Units*	*Key Disciplines*
K. The Child and His Immediate Environment	Living Together in the Home, Families Around the World, School Life and School Plant	Sociology
I. Families and Their Needs	The Family and Its Economic Role; Home, Family, School in Other Cultures; Living in a Neighborhood	Economics, Sociology
II. Communities and Their Activities	Living and Working in a Community, Communities Around the World, Communities Change	Sociology, Economics, Political Science
III. Communities and Their Development	Growth and Development of a Community, Different Community Developments, Interdependence of Communities	Economics, Geography, History
IV. World Regions and Changing Cultures	Identifying World Regions (Mapping, Understanding Climates), Investigating Selected World Regions (Natural Environment, Ways of Living, and Culture Pattern in Each Region), Surveying World Progress (Changes Within a Culture, Contributions Through Change)	Geography, Economics, Sociology, Anthropology
V. Our Nation and Its Growth (Wisconsin Focus)	Our Land and People: A Framework (Structure of Land, Composition of Population, Wisconsin's Land and People), Our Land and People: The Past, Our Land and People: The Present	History, Geography, Economics, Political Science
VI. Man and His World Community	Man and His Nature (Archaeological and Anthropological Evidence, Factors Essential for Civilization), Man and His Struggle for Survival Through the Ages (Interaction with Environment, Communication, Transportation, Government, Cultural Growth, Interdependence), Contemporary Problems of Man	Anthropology, History, Geography, Economics, Sociology, Political Science

[*] Source: *Supplement to Guide to Teaching Social Studies, K-6.* Madison, Wisconsin: Madison Public Schools, 1966.

There seems to be no doubt but that the efforts of the Joint Council for Economic Education over the past two decades, and, more recently, the commercial publication of materials from the Elkhart, Indiana, Experiment in Economic Education have had great impact on primary programs.

Anthropology, sociology, and economics continue to be drawn upon in intermediate grade programs, through regional studies in some curriculums and, in others, through units that provide rather systematic treatment of aspects of these disciplines.

Increased attention is being given to governmental institutions in connection with study of communities in the primary grades, and more explicit treatment is provided in intermediate grade study of the United States, of culture areas of the world, and of the rise of civilization. Informal approaches to such political science concepts as power, authority, conflict and conflict resolution, justice, and citizen participation are recommended for the earlier years, in the context of study of family, school, neighborhood, and community. More direct development of these concepts in the intermediate grades is suggested through topics from American history, such as the Revolutionary War, and in area studies that involve nations in other parts of the world.

The emphasis on content from the behavioral sciences does not mean that geography and history, traditionally dominant in elementary social studies, are disappearing from the program. Geographic concepts and skills are being emphasized much earlier than formerly, as we shall see. Elements from history are utilized at many points in the programs.

2. *A Comprehensive World View*

Greatly increased attention is being given in elementary social studies to peoples of the world outside the United States and western Europe, the areas to which most of our attention has traditionally been given. The new primary studies of families and communities "around the world" usually include examples from one or more nonwestern cultures.

The same trend appears in the content selected for culture area units and historical studies in the intermediate grades. Asia and Africa are being given a greater proportion of the time that is devoted to the Eastern Hemisphere, and the early civilizations of India and China are studied along with those of the ancient Mediterranean world.

The concern to help children develop a more comprehensive world view is reflected in both the experimental projects and the new programs in public school systems.

3. *Depth of Content*

Deeper and richer content is being utilized in the new elementary social studies programs. This development is manifested in several ways.

The examples cited here indicate that primary children are studying a range of topics that are truly new in elementary social studies, particularly topics from anthropology, sociology, and economics. Some of these were formerly not treated until the secondary years, while others were not in the traditional K-12 program at all.

Some topics and themes are being "moved down" within the elementary program by a year or more. Studies of the local community and of communities in other cultures are appearing in grades 2 and 3. In some programs, the first cycle of U. S. history has been moved from grade 5 to grade 4, with a biographical approach emphasized. There is also a marked tendency to introduce geographic concepts and skills much earlier than has been done traditionally. A number of programs call for planned experiences in the kindergarten and first grade to introduce children informally (or even formally) to globes, flat maps, and directions. These experiences are followed by systematic teaching in grades 2 and 3 of map-reading skills and geographic concepts that were formerly reserved until grade 4. Intermediate grade children are expected to progress to levels of map interpretation and geographic thinking that have traditionally been considered appropriate goals for the secondary school years.

A third approach that is used in some of the intermediate grade programs, in the effort to provide a richer content, is that of limiting the number of topics to be studied so that more time can be spent on those selected. Where this is being done, it is usually associated with planning for a sequential K-12 program in which there is effort to provide for articulation of topics and balance in the content of the total program. It is also associated with efforts to establish a conceptual framework for the total social studies program and provide recurring treatment of the basic concepts and generalizations that constitute the framework.

4. *Content Within a Conceptual Framework*

We have heard a great deal, in recent years, about conceptual approaches to curriculum making and instruction, with much variety of meaning. As I see it, a conceptual approach in social studies means helping the learner place each fact in an ideational framework—that is, to see relationships among facts and use facts to build significant concepts, generalizations, and ideas. A conceptual approach does not mean any less attention to facts, but it does mean a different kind of attention. It involves getting pupils to see the relationships among the facts and do more with them than merely memorize.

To establish a conceptual framework and help pupils work within it requires two things: first, identification of truly significant concepts, generalizations, and ideas by the teacher as well as the curriculum-planning group, and, second, recurring and cumulative treatment of the concepts and generalizations that have been selected, with each recurring treatment handled through new content and varied approaches. The generalizations must not be presented as facts to be remembered nor given to children to memorize. Instead, pupils must work with bite-sized pieces of information, putting the facts together to draw their own conclusions in their own words and to formulate sub-generalizations that are related to the major generalization. As the student builds many sub-generalizations and sees relationships among them, he gradually gains a fuller, deeper understanding of the major idea that is involved.

The conceptual approach has revolutionary implications for selection of content. If we really accept it, we no longer are concerned about coverage of an enormous amount of factual information. We escape the compulsion to try to teach children a little bit about everything, which is impossible anyway. For example, we can move away from the kind of sixth-grade course on "Lands of the Eastern Hemisphere," in which every nation of Europe, Asia, Africa, and the western Pacific has to be "studied." Instead, we can select a limited number of case examples that children can use to expand their understanding of the concepts and generalizations that have been selected as significant. Thus we can give children the time they need to question, investigate, compare, and develop ideas. We make time for them to apply concepts and generalizations about economic life, government, cultural diversity, and culture change, as they develop each case example.[5]

5. Process as Content

The fifth development I shall identify is that of considering process as content. By this I mean that concepts of method are seen to be as significant as theoretical or substantive concepts. Children are learning, at a simple level, how archaeologists work as well as what archaeologists have concluded from their work. They are learning how historians collect and evaluate evidence, how sociologists make surveys, how geographers organize data on maps, and so on, as well as studying the conclusions that historians, sociologists, and geographers have arrived at. They are being given opportunities to apply some of these methods of inquiry, again at a very simple level. All of this involves, of course, procedures that encourage discovery, inquiry, and inductive procedures in learning.

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[5] For an excellent discussion of conceptual approaches in elementary social studies, see: John Jarolimek. "Conceptual Approaches: Their Meaning for Elementary Social Studies." *Social Education* 30: 534-36+; November 1966.

In addition to these five common elements in the new social studies programs are several others that can only be listed. There is attention to value clarification. There is emphasis on a systems approach to the use of multi-media materials. There is experimentation with different grade placements of topics and subjects. There is experimentation with different forms of organization—interdisciplinary, multi-disciplinary, and separate disciplines. There is much use of the comparative approach and of case studies of various types. All of these affect the selection of content, although they are more directly concerned with how the content will be handled after it has been selected.

Projection of Probable Major Agreements

The foregoing analysis of current developments in elementary social studies suggests some probable major agreements. Within each general area of agreement, however, there are disagreements and problems.

1. The trend of introducing considerable content about peoples of other cultures is well-established. I believe more and more schools will build such content into their programs in both the primary and intermediate grades.

The emphasis on such study in the primary grades will probably be heavily anthropological and sociological, but I doubt that there will be much effort to teach these disciplines as disciplines. In the intermediate grades, culture area studies drawing on all the disciplines will be the vehicle for study of nonwestern as well as western cultures.

2. Economic concepts will and should, I believe, constitute an important strand in the elementary program. Whether they will occupy as important a place in the primary years as some current programs would give them is open to question. As materials that draw on the other disciplines become more generally available, I suspect that the schools that are now focusing heavily on economic themes in the early grades will experiment with these newer materials and arrive at some "mix." There is not total agreement that the optimum time for emphasis on economic understandings is at the primary level.

3. I predict that many, probably most, schools will continue to use the expanding environment plan for establishing grade-level themes, but that the themes will be interpreted much more flexibly and broadly and

that a great deal of new content will be utilized. The Minnesota and Wisconsin examples I have cited illustrate this point.

4. I predict that deeper study of fewer topics will characterize elementary social studies in the future, that we will substitute "learning more about less" for the situation that has been described in the quip, "Never have so many learned so little about so much."

5. I suggest that the effort to combine conceptual approaches with depth study units and to provide for sequential development of concepts, generalizations, and processes of learning will continue apace.

I fear there is considerable confusion in some of the current efforts on this score. The confusion has at least two bases. As I reviewed a group of new curriculum bulletins recently, it seemed to me that there was frequently a lack of understanding of what is meant by a "conceptual structure" and of what is involved in the development of concepts and generalizations. Because of this lack of understanding, there is danger that the conceptual approach may receive more lip-service than actual implementation and be discarded as "not working" when, in fact, it may not have really been tried. We have seen this happen with other potentially valuable ideas.

The other source of confusion is failure to remember that true sequence in learning is the sequence that the learner develops within himself. Our curriculum planning can provide a favorable or unfavorable setting for sequential learning; but in using the plan, the teacher must continuously diagnose the pupil's level of understanding and move on from where the child is. In short, we do not provide for sequential learning merely by introducing new content or moving hunks of content around from one grade to another.

6. I predict that attention to process as content will characterize elementary social studies programs and that guided "discovery learning" will be used in combination with "reception learning." For an excellent discussion on this point, I would refer you to a recent article by Charlotte Crabtree, entitled "Inquiry Approaches: How New and How Valuable?" [6]

The New Social Studies Viewed in the Larger Context

The forces affecting the revision of elementary social studies are much the same as those that have given direction to recent revisions in other areas such as mathematics and science. We can summarize these forces as follows:

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[6] Charlotte Crabtree. "Inquiry Approaches: How New and How Valuable?" *Social Education* 30: 523-25+; November 1966.

1. The new interest in the school program of some academic scholars and their willingness, or even determination, to participate in developing new curricula.

2. Societal changes that require a rethinking of the school curriculum if it is to meet the needs of a world that is changing rapidly in the direction of urbanization, industrialization, and ever-closer interdependence.

3. Changing conceptions of readiness for learning, which have brought demands for a stepped-up content in the various curriculum areas, and changing emphases in ideas about how children learn. Included here is the current attention to conceptual approaches, involving analysis of the "structure of the disciplines," and the emphasis on inquiry and inductive learning.

4. The increased availability in recent years of funds for multi-media learning materials, largely through federal legislation. As more funds become available, commercial producers are quick to respond with more and varied materials for purchase.

These forces operate somewhat differently in social studies than in other subjects, because of the special characteristics of the field.

The social studies field draws on seven disciplines, each with its body of content, its conceptual structure, and its method of inquiry. True, these disciplines are related and even overlapping in the data they draw upon and in the methods of inquiry they employ. Yet each is a distinct discipline, and there are spokesmen for each one who insist that its structure not be violated in attempts to introduce it in the schools. Fortunately, there are others who are willing to seek varied ways of treating the various disciplines in the school program.

The enormous range of the social sciences means that there is an embarrassing wealth of content from which selections must be made. The separateness of the disciplines, and the insistence of some that the integrity of each must be respected, increase the problem of organizing the selected content for instruction. Decisions about sequence and grade placement of topics are complicated by the fact that analyses of the social sciences do not reveal any predetermined logical order in which specific content or concepts should be encountered by learners.

With regard to the impact of social change on the school curriculum, social studies is affected more directly and more comprehensively than any other school subject. It is also one of the most sensitive areas, so far as public reaction and pressures are concerned.

When we bring in new content in response to the needs of our changing society, at least two things happen. One is that we must eventually eliminate some of the traditional content—and this is likely to bring repercussions from adults in the community, too many of whom do not hesitate to qualify themselves as "experts" in social studies when they would not dream of assuming this role in connection with modern mathematics or the new science programs.

The other thing that happens, if the area of social studies is truly responsive to social change, is that unsolved problems of society are examined, even in the elementary school. This is likely to bring strong reactions from community groups and individuals who, for any one of a variety of reasons, think such study undesirable.

What are some of the lessons we can learn from the experience of others and can apply in developing better social studies programs? There are several, and no priority is intended in the order in which these are listed here.

One is that changes in the social studies program must be interpreted to the public. This proved to be important in introducing modern mathematics and extended science programs. It is even more critical with regard to social studies. Community leaders must be appropriately involved throughout the change process. Without public understanding, a new and functional social studies program is likely to have little chance of success.

Second, teachers, as well as supervisors and administrators, must have extensive opportunities to expand their own knowledge of the social sciences, of new learning materials that are available and of effective instructional procedures. We have seen teachers flounder with modern mathematics and science, sometimes almost defeating efforts to introduce more effective programs in these areas. The success of a new social studies program depends on many factors, but one of the most crucial is this matter of teacher competence.

Obviously, there are implications here for both in-service and pre-service education of teachers, and for the search for better ways to deploy the time and talent of individual teachers.

We have used social studies as a case example of new content, and the concern for content is a legitimate focus for discussion among those responsible for leadership in curriculum change. In discussing content, however, we must always keep in mind the needs of the children for whom our schools are operated. We are aware, I am sure, that while it is urgently important to select content that is significant, the thing that counts in the long run is what the children do with the content to broaden their own horizons and grow toward self-fulfillment.

New Curriculum Designs for Children

LOUISE M. BERMAN

A THOROUGH treatment of the topic, "New Curriculum Designs for Children," lies beyond the space allotted for this paper. What can be done, however, is to present briefly some concepts and priorities that ought to be considered in developing curriculum designs both for today and for 25 years hence.

Design has a delightful connotation in that the root meaning is "to mark out." Inherent in the definition also is the concept of creating. If we are to mark out or create, certain materials are necessary. The designer, however, can arrange these as he sees fit. The pattern may be complex or simple, bold or subtle, subdued or vividly colored.

In considering the development of curriculum designs for the schools of the 1990's, attention will be given to these items: (a) the unique contributions of various scholars to curriculum designs, (b) the stages in the development of a curriculum design, (c) new priorities for the substance of curriculum designs, (d) new priorities in the act of intervention, and (e) other considerations in curriculum designing.

It should be noted that we are concerned with the concept of designing as well as with designs. Curriculum designs cannot be separated from the ongoingness of the act.

Basic Assumptions Regarding Curriculum Designing

Now I would like to share with the reader certain beliefs on the nature of man and the nature of curriculum development that have helped shape my outlook and my proposals.

The Nature of Man

1. Man is a highly complex being. Oftentimes in thinking about him as we develop school programs, we have explained him in rather simple concepts. Such simplicity has caused untold damage in the planning of school programs, for man is seen in too unrealistic a manner.

2. Man is an ethical and aesthetic, a legal, social, psychological, and religious being. Any curricular design which fails to account for the many facets of man is cheating him of enhancement in critical areas.

3. We have also been erroneous in thinking about man as though his emotional and rational processes could be dealt with separately. We must strive for a set of concepts which does not dichotomize the person in this way.

4. We are on the fringe of possessing the tools to determine better how individuals learn. We are also on the edge of certain new developments in teaching styles. As knowledge increases about learning and teaching, curriculum designs can be far more creative and imaginative.

The Nature of Curriculum Development

1. The language of the curriculum should derive its roots from the folklore of the people and the profession. Being a relatively new profession, we have adopted some pseudo-scientific terms which are not necessarily central to our tasks. Such use of language does not contribute to the integrity of the profession.

2. Automation and technological advances have caused us to give children more of the same in the curriculum rather than to develop unique curriculum designs which utilize the best of what we know about technological advances and human encounters.

3. The use of auxiliary personnel in the classroom is causing major shifts in who makes curricular decisions. The educational plaza and planned community concepts not only will bring more persons into the school but also will cause more overlap in the common experiences which children share with their parents. This may increase similarities between the experiences children have at home and at school.

4. Innovation for its own sake will die down. In its place will be more longitudinal studies.

5. Curriculum workers will be less enamored with the many analytic tools which have characterized much curriculum change within the past few years. New strides will be made in combining analytic with syn-

thesizing skills so that comprehensive curriculum designs will emerge. More persons who can make a comprehensive design out of tangled skeins will be visible. Who knows—we may even see another John Dewey!

The Unique Roles and Functions of Curriculum Designers

A review of the history of curriculum thinking indicates that the profession has felt that a wide range of persons should be involved in the development of curriculum. Oftentimes, however, the unique roles and functions of persons with widely varying competencies have not been adequately defined. We have attempted to bring together university and public school workers, but the results of collaboration have not always been the most fruitful. Contributing to curriculum design in the future will be at least four types of scholars.

First, curriculum designs will involve the work of students of man. Deriving insights from psychologists, theologians, dramatists, social scientists, poets, businessmen, and others who are students of the human condition, this group of persons will develop alternative ways of viewing man. Often, but not always, expressed in behavioral terms, these views will be so stated that they can be used by the curriculum worker in selecting content and experiences appropriate to developing various views of man.

A second group of scholars will be concerned with producing instructional materials. The eclectic textbook that fails to take a point of view with any degree of clarity will seldom be seen except in historical collections. Materials, whatever form they take, will present, for the most part, a single viewpoint sharply and concisely. Producers of materials will seek to develop materials that arouse interest, cause wonder, contain aesthetic qualities, and propose or elicit varied follow-up activities. In addition, materials will be designed not only to present content but also to develop selected skills or processes. Scholars concerned with the production of materials will see man as a maker of the tools of his learning and not as a tool of his own making.

A third group of scholars will be interested in obtaining new insights for the curriculum field. Perhaps located on a university campus, curriculum theorists will include among their concerns new knowledge in education and other fields that has relevance for curriculum development. These are the scholars asking new questions and seeking to fill in the gaps in knowledge to old questions. Hopefully they will possess synthesizing as well as analytical skills. Although they can develop and test hypotheses, they will be more skilled in developing comprehensive theories, parts of which may be tested by others. One of the major tasks of this group of scholars is bridge building between what is common practice within the schools and that which is being discovered through research and study. The gap between the ideas of the curriculum theorists and those working in the schools will persist, but it will narrow, particularly if the theorists add to their competencies more skills in bridge building. One way that the curriculum theorists will contribute to school programs is through developing statements that link school practices and desired outcomes.

A fourth group of scholars will be those who have the responsibility for developing a school program for children and youth within a given situation. Such persons may be assistant superintendents in charge of instruction, principals, curriculum coordinators or directors, and teachers. These persons have the dual responsibility of possessing adequate knowledge relative to curriculum development plus the leadership skills which enable them to release potential in others. These educational leaders have studied and formulated a view of man; they have helped teachers do the same. They select and help teachers choose learning materials compatible with their views about the person. An important new skill which these scholars of the actual situation possess is the ability to work with the theorist in the bridge building mentioned earlier.

Although we are speaking of these four groups of scholars as though an individual could fit with only one, our intent in defining their competencies is to show the several competencies that must go into curriculum designing. In actuality, many educators will continue to play the roles of two or more of these groups of curriculum scholars.

The Stages of a Curriculum Design

Curriculum design in the new elementary school, in addition to drawing upon the different types of scholarship, will be oriented to a new time schedule. Curriculum development will take place in three overlapping stages.

The first stage is what might be called the preteaching stage. Here we are concerned about all that curriculum workers, including teachers, must consider before the teacher enters the classroom—instructional goals, the selection of materials, the preparation of lessons for individuals or groups, the selection and preparation of auxiliary personnel, and the timing of a given lesson.

The second stage is actual on-the-spot teaching. Here we are interested in materials, grouping, procedures for individualizing instruction, language, and gestures—everything a teacher uses to help children see content in a more meaningful way. Concern is also given to the on-the-spot decisions teachers make as they interact within the classroom setting. This stage of curriculum designing hopefully will increasingly receive careful attention.

The third stage involves the making and evaluating of actual records of what transpired in the teaching situation—tape recordings, videotapes, written records, and the like. Analysis will deal with why selected decisions were made as the teacher engaged in multitudinous transactions with children and other adults in the classroom setting. Obviously this third stage then leads back to the first stage as plans are made for the next teaching situation. Curriculum exhibits at future national conferences will contain examples of the three types of materials just mentioned instead of only curriculum guides.

New Priorities in the Content of School Programs

In the new elementary school, more care will be taken to select significant concepts to be taught than has been traditional in the past. The necessity to know about a staggering number of fields of knowledge will mean that educators will select only the most central ideas from key disciplines for inclusion in the elementary school program. We will not be concerned that all fields of study be included in elementary school programs. For example, we may have learned that the formal teaching of mathematics might better begin in upper elementary or junior high school.

In addition, much of the material treated in the elementary school will be chosen to help man better accommodate to and change the environment. The complexity of life will necessitate man's having at his disposal a set of tools that will enable him to maintain his own equilibrium in a world in which change rather than stability will be the order of the day.

Because curriculum workers will be more sophisticated in seeking to understand man, curriculum content will be selected with a view to developing or enhancing a particular view of the person. The discrepancy between behavioral objectives and what the school teaches will not be as great as it is now. To differentiate content from methodology and process may be difficult at the elementary level because much content will deal with basic human functions or processes such as becoming aware, forming attachments, creating, knowing, and so on.

Since the early 'sixties the schools have focused much of their attention upon scholarly knowing within the various disciplines. In the earlier stages of the curriculum reform movement, the study of the disciplines had well defined foci. Attention was given to the boundaries of the discipline, to relevant questions and modes of inquiry. Because much literature has been devoted to a consideration of the disciplines as the substance of the curriculum, there is no need to treat the topic in detail. The idea, during its inception, was a fruitful one. At the present time, however, some are questioning whether teachers are teaching the disciplines as modes of inquiry or whether their familiarity with the new materials is causing them to pass on the generalizations before children themselves have had the opportunity to discover or formulate them.[1]

Our hunch is that the new elementary school will continue to offer programs containing the recreated disciplines as they were originally conceived, but the study of such subjects will occupy only a portion of the day.

Let us now consider other areas which should receive top priority in the curriculum of the new elementary school.

New Emphases in the Communication Skills

Communication will be studied as a key to unlock our understanding of other persons who have lived before and those who are contemporaries. Less priority will be given in the elementary school to learning the formal properties of language.

One area that needs retooling is the field of the spoken word. Trends are evident at the secondary level which indicate new and needed emphases in speech. According to William Work, Executive Secretary of the Speech Association of America:

> Informative speaking, epitomized at its lowest level by the "What I Did Last Summer" speech and the book report, is getting less stress than is persuasive speaking. The latter develops the student's ability to analyze issues critically and competence to prepare suitable logical and emotional appeals for a specific audience that has been studied in depth.[2]

Since persons will have access to varieties of written materials, the elementary school as well as the secondary school will give increased attention to the persuasive components of speech. Good persuasive speaking involves logic that makes an impact. The mere reporting of factual data probably will be left to other forms of communication.

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[1] This observation was made during a recent meeting of the Commission on Current Curriculum Developments of the Association for Supervision and Curriculum Development. For a view of one way of including the recreated disciplines in the curriculum, see: Alice Miel. "Knowledge and the Curriculum." In: *New Insights and the Curriculum*. Alexander Frazier, editor. Washington, D. C.: Association for Supervision and Curriculum Development, 1963. pp. 71-104.

[2] William Work. "New and Needed Developments in Speech." *NASSP Bulletin* 51(318):41; April 1967.

A second communication skill that will receive increased attention in school programs is that of nonverbal communication. Children will learn to be more discerning in their listening, picking up the subtle overtones as well as the gross, obvious points. They will learn to listen for hidden meanings as well as dictionary definitions of words. Children will learn to see telling gestures, facial expressions, characteristic modes of dress, and the utilization of space in professional and social settings.[3] In a world which is becoming increasingly smaller, the expectation cannot be that individuals will be able to communicate the spoken word effectively in the myriad of spoken and written languages. However, individuals will be expected to know something about the vital messages that people send through means other than words.

A third communication skill that will receive increased attention has been referred to by some as that of communion. Here we are concerned with interpersonal skills that enable a person to encounter another with authenticity and integrity. At the present time, a discussion of communion often implies lack of logic and scholarliness. Twenty-five years hence, hopefully we can teach this prime purpose of communication with knowledge and conviction.

The Process of Systematizing

Traditionally much attention has been given to the teaching of the systems and orders which have been devised by others. Relatively little thought has been given to helping the child make sense of and systematize the world which he perceives. The existential world of the child will here be referred to as the internalized system.

In addition, the child needs to know the procedures that groups of persons use to make sense out of life in the wider community. These procedures are often more formalized and usually are external to the child. Both the informal and the formal, the internalized and externalized ways of making order should be part of the knowledge of the elementary school child.

Internalized order. Writers, poets, religious leaders, dramatists, psychologists, and others who have been concerned with man's uniqueness have stressed the highly original ways in which each man takes in, reworks and organizes his experience. An analysis of the works of these experts in human nature can develop an awareness of the uniqueness of internalized ways of organizing or patterning. Such study helps us realize that no man can truly see or know the world of another which is so neatly hidden from human view. The meaning of individual modes of perceiving and organizing has been beautifully expressed by modern existentialists.[4]

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[3] For an examination of what the use of space may communicate, see: Edward T. Hall. *The Hidden Dimension.* New York: Doubleday & Company, Inc., 1966; readers may be acquainted with his earlier work, *The Silent Language.* New York: Doubleday & Company, Inc., 1959.

One can infer also that writers concerned with individual modes of perceiving assume that perceptions are organized in accord with previous experiences, attitudes, dispositions, and values of the individual.[5] Some have referred to what happens between the time that perception occurs and behavior and thinking are noted as ego processing.[6]

In any event, the highly personal world of each student will be prized. How to derive, maintain, and change the frameworks which help an individual tie his experiences, feelings, and information together will be given high priority in new school programs. At the present time, our knowledge is scant about how to provide such learning opportunities. Soon, however, children will become aware of the remarkable facility which they possess and will learn to strengthen it.

Some concepts that can and ought to be taught about the process of internalized ordering are the following:

1. Each person takes in, uses and makes use of his perceptions in unique ways.
2. The uniqueness of individual perceiving and ordering of impressions is a peculiarly human function. Each individual should prize his own modes of organizing and also the right of others to do the same.
3. Personalized frameworks vary in their degree of stability. At times

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[4] Among these are: Paul Tillich. *The Courage To Be*. New Haven, Connecticut: Yale University Press, 1952; Martin Buber. *I and Thou*. New York: Charles Scribner's Sons, 1958; second edition; Karl Jaspers. *Man in the Modern Age*. New York: Doubleday Anchor Books, 1957; and Michael Polanyi. *Personal Knowledge: Toward a Post-Critical Philosophy*. Chicago: University of Chicago Press, 1958.

[5] See: Arthur W. Combs and Donald Snygg. *Individual Behavior: A Perceptual Approach to Behavior*. New York: Harper and Brothers, 1959; revised edition; also *Perceiving, Behaving, Becoming: A New Focus for Education*. Arthur W. Combs, editor. Washington, D. C.: Association for Supervision and Curriculum Development, 1962.

[6] See: Eli M. Bower. "Personality and Individual Social Maladjustment." In: *Social Deviancy among Youth*. Sixty-fifth Yearbook of the National Society for the Study of Education, Part I, Chicago: University of Chicago Press, 1966. pp. 103-34; also William G. Hollister. "Preparing the Minds of the Future: Enhancing Ego Processes Through Curriculum Development." In: *Curriculum Change: Direction and Process*. Robert R. Leeper, editor. Washington, D. C.: Association for Supervision and Curriculum Development, 1966. pp. 27-42.

persons may wish to reevaluate their organizational schemes in order to accommodate new ideas which do not fit old patterns. In other words, a pattern helps an individual order his thoughts but should not be so inviolable that it governs his total intake of ideas.

4. The verbalizing and comparing of children's modes of organizing help each sharpen his framework and change when such action seems appropriate.

5. A variety of emotional states may accompany the process of organizing. When stability is present, the child may feel contented and satisfied. Dissatisfaction and feelings of frustration may accompany an attempt at reorganization.

6. Individuals should strive for beauty, integrity, and a sense of priority in the development of internalized frameworks.

Externalized order. Were each individual to live on a desert island alone, there would be no need for external order. Because, however, persons must live together in groups of various types, each group having different expectations, it is necessary that ways be found to maintain external order. Many sources of externally derived and imposed order could be described, but for our purposes, only one will be considered. It is chosen because it has not been given much attention in developing programs for elementary school children.

Possessing much potential for helping persons in groups prevent and resolve conflicts and having the qualities to enable the establishment of order, the law is an area from which we can derive many insights to forward our concepts of order. Harold Berman and William Greiner say:

> Law is an institution in the sense of an integrated pattern or process of social behavior and ideas. What goes on inside courts, legislatures, law offices, and other places in which law-making, law-enforcing, law-administering, and law-interpreting are carried on, together with what goes on inside the minds of people thinking with reference to what goes on in those places, forms a law way of acting and thinking, which overlaps but is not identical with economic, religious, political, and other social ways of acting and thinking. [Italics removed.]
>
> As soon as law is defined in terms of a set of actions and ideas, instead of in terms of a set of rules, it becomes possible to study its interrelationships with other types of patterned behavior and thought.[7]

According to these authors, law enables the study of the formal institutional processes by which social order is achieved. This is coupled with a theoretical framework for explaining and justifying the more formal processes.[8]

They later say:

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[7] Harold Berman and William R. Greiner. *The Nature and Functions of Law.* Brooklyn, New York: The Foundation Press, Inc., 1966. pp. 6-7.

[8] *Ibid.*, p. 12.

> Law is thus seen as a special kind of ordering process, a special type of process of restoring, maintaining or creating social order—a type of ordering which is primarily neither the way of friendship nor the way of force but something in between.[9]

Law has a certain formality about it. It differs from many agreements and contracts made among persons in that it is deliberate and definite. Its main functions are:

> (a) To resolve disputes, (b) to facilitate and protect voluntary arrangements, (c) to mold and remold the moral and legal conceptions of a society, and (d) in the Western tradition, at least, to maintain historical continuity and consistency of doctrine.[10]

If insights from the discipline of law are to influence externally imposed organizing systems, then students must learn to deal with conflict, dispute, and alternatives within the school curriculum. Controversy, competing ideologies, and passion often characterize real-life situations, yet we often teach as though critical thinking takes place in a neutral, dispassionate environment. Thus, the following ideas are among those that will be taught concerning the external ordering of ideas or events:

1. Formal, deliberate attempts at ordering are necessary for the maintenance of any group.
2. Procedures are attempts at ordering and are ways of resolving problems when a group works together.
3. Greater emphasis upon the analysis of public issues helps individuals see the prerequisites to the analysis of conflict in addition to the use of critical thinking skills.[11]
4. Much of our knowledge which appears to be private has within it many tacit components which have been derived from our public participation in human affairs. Children need to bring to the level of awareness the various sources of their knowing and ordering.[12]

Man by nature seeks to systematize his experience. Existentialist thinkers have helped us see the fact that each man orders his experience in a different way. Social orders, such as law, point out the formal and external arrangements that must be made among persons if adequate group functioning is to take place.

The young child is constantly concerned about procedures governing his play with his peers. We deprive the child by not letting him in on some of the formal procedures for peacemaking and the resolution of conflict. The child is also interested in his own uniqueness. We do him an injustice by not helping him better understand the internalized processes he can develop to make sense out of what happens to him.

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[9] *Ibid.*, p. 28.

[10] *Ibid.*, p. 36.

[11] See: Donald W. Oliver and James P. Shaver. *Teaching Public Issues in the High School.* Boston: Houghton Mifflin Company, 1966. Although written for secondary school educators, the book has many implications for the elementary school.

[12] See: Michael Polanyi. *The Tacit Dimension.* New York: Doubleday & Company, Inc., 1966.

The Nature of Attachments

As life in the next few years continues to move ahead at an ever-increasing rate, persons will have the opportunity to form attachments to a wider variety of persons, objects, or ideas. Those things to which a person ought to become attached, as prescribed by cultural norms, will not become as clearly delimited as they are today. For example, a re-examination of the interests, roles, and attitudes commonly ascribed to each sex will probably broaden the scope of what are appropriate sex roles in tomorrow's society.

Throughout different stages in life, individuals may form different types of attachments. For example, mutually satisfying relationships that a child often forms with adults represent a necessary kind of attachment if the child is to possess the emotional stamina to carry on many of life's challenges in his later years. Bensman and Rosenberg say, "Unconditional love, warmth, affection, intimate care, and attention are literally priceless; their absence inflicts overwhelming and irremediable damage."[13] The person who has not found appropriate ways of relating to others may find himself in the position of subconsciously seeking the attention of others to the neglect of other types of constructive work or play.

Even as the child particularly needs the sustaining support of other persons, he must also define how he will relate to society in order to accomplish what he perceives to be useful ends. Bensman and Rosenberg say:

> It follows that the potentially creative human being must "use" society to extract from it all the support it has to offer while mustering his resources to repel available "solutions" manufactured for him as well as attractive or oppressive alternatives to his own natural unfolding. All this implies that one needs to develop in childhood the psychological strength to define his own tasks, to create his own vision and not to let himself be deflected from it. [Italics removed.][14]

As an individual matures, creates his own vision, and defines his tasks, he determines that to which he will devote time, energy, and resources. The nature of his commitments determines his friends and those persons to whom he shows love and affection. The degree to which he gains a response from that to which he attaches himself to a great extent determines how he nourishes what has the potential to become dear to him.

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[13] Joseph Bensman and Bernard Rosenberg. "Healthy Potentialities and the Healthy Society." In: *Explorations of Human Potentialities.* Herbert A. Otto, editor. Springfield, Illinois: Charles C. Thomas, Publisher, 1966. p. 214.

[14] *Ibid.*, p. 25.

The elementary school program must make provision for children to become aware of their commitments and possibly to change them. Some children may have a strong orientation to persons, either family or friends or both. Others may prefer to deal with objects or ideas.

An understanding of attachments enables the child to understand better the nature of love and its relationship to sex, materialism, idealism, religion, and other factors and causes which absorb men's energies. Only as the child learns that attachments cannot be made to many objects or things simultaneously will he learn to differentiate the good from the better and the better from the best. He will learn to detach himself at times from certain objects and persons in order to attach himself to what, in his best judgment, should receive the totality of his energies, thought, and devotion at a particular moment in time.

Other Priorities in Content

Limitations of space preclude our going into detail concerning other areas which will be given increased attention in the school of the future, but let me mention a few vital topics.

Balance between spontaneity and the cultural conserve. "The arch catalyzer of creativity is spontaneity, by definition from the Latin *sua sponte* which means 'coming from within.'"[15] Spontaneity operates in the present and is a new response to an old situation or an adequate response to a new situation. The finished product is the cultural conserve that preserves the values of a culture. In addition it plays a significant role as a "*springboard for enticing new spontaneity toward creativity.*"[16] Children, particularly in the middle grades, will learn to differentiate more sharply between spontaneity which takes place as a result of knowledge of a subject or area and spontaneity which comes about in an undisciplined way. More emphasis will be placed upon disciplined forms of inquiry so that creativity can frequently be intentional.[17]

[15] J. L. Moreno. "Spontaneity, Creativity, and Human Potentialities." In: Herbert A. Otto, *op. cit.*, p. 46.

[16] *Ibid.*, p. 47.

[17] See: John I. Goodlad and others. *The Changing School Curriculum*. New York: The Fund for the Advancement of Education, 1966. p. 91, for a discussion of the concept of "disciplined discovery."

Preparation for different stages of life. We are living in a youth-oriented culture, and today's children are taught in subtle ways to be intolerant of old age. Tomorrow's school will focus upon the contributions persons make in the various stages of life. The transiency of life will be stressed; the topic of death will not be unfamiliar in school programs. There is research to support the concept that persons who have learned to function at high creative levels have overcome major physical handicaps in the attempt to utilize their potential as long as possible.[18] Schools, therefore, will give increased attention to developing skills that will give satisfaction during both youth and old age.

Wonder as an ingredient to personal knowing. The new elementary school curriculum will make available opportunities to wonder. Students will learn to identify their own sources of curiosity, and the topic will be considered within school subjects as appropriate. When a school subject becomes so crystallized that the capacity to wonder is no longer fostered by its teaching, then new modes of looking at the subject will be ascertained.[19]

Internal awareness. Unless an individual is aware of the multiplicity of factors which the school brings to bear upon him, a given task may not produce the intended outcome. Thus, children should early become aware of their modes of thinking, of the assumptions underlying their values, and of their prevailing ways of behaving. How to become aware of one's self will be among the content that is taught in the school.

The Act of Intervention: New Priorities

We have been concerned thus far only with priorities about what the new elementary school should teach. There must be a way, however, of intervening between the substance of education and the child. Such intervention may be inventive or stereotyped, systematic or haphazard, integral to the subject or unrelated to it. Intervention is often referred to as method.[20] Method, loosely used here to include processes, modes of interaction, and materials, refers to the old curriculum question: How shall we teach? Let us consider a few ways in which intervention may be taking place in the new elementary school.

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[18] See Leonard Pearosn. "Aging Phenomena in the Perspective of Human Potential." In: Herbert A. Otto, *op. cit.*, pp. 112-34.

[19] For a consideration of the lack of attention to wonder in the new mathematics programs, see: Brother L. Raphael. "The Return of the Old Mathematics." *The Mathematics Teacher* 60: 14-17; January 1967.

[20] For a thoughtful consideration, see: Justus Buchler. *The Concept of Method.* New York: Columbia University Press, 1961.

Early Identification of Growth and Development Patterns

Results of experimental programs with very young children indicate that the early induction of the child into a planned educational program can make a difference, but the difference is more lasting and effective when the program is continuous rather than short-term. If the trend of beginning the child early continues, hopefully the beginning experiences can be partially diagnostic. By identifying individual patterns of learning, procedures in developing values, language skills, etc., the school can begin to work out highly personal programs for each child. Related and integral to the public school, classes for very young children will vary, of course, from community to community, but in all programs diagnosis will be a predominant factor.

When children should learn to read and how they should be taught will be questions of the past.[21] Multiplicity and diversity of programs will be the order of the day. Because of the greater focus upon listening and oral language, less attention will go to formal reading programs for most children, and the entry age into the programs will be varied.

Increased knowledge of the self-concept and its relationship to learning will cause the school to select modes of teaching that will help children develop adequate self-concepts.[22] For example, although the statistical level was marginal, preliminary research on beginning reading indicates that success in the field is determined not so much by intelligence as by self-concept and measures of ego-strength. Assessment of ego-strength and what can be done to build it will be methodological concerns that will occupy the time of many teachers of young children and hopefully of older ones as well.[23]

Classroom Language as Intervention

With the continued research on teaching and the studies of the language of the teacher, the new elementary school teacher will be much more sensitive to his ways of intervening between what is to be learned and the child. Greater knowledge of what happens in the teacher-child relationship as well as in the teacher-children relationship will be available. In reviewing his preliminary studies, one investigator reports that when a teacher is followed around the classroom where instruction is individualized, his verbal behavior as recorded under the Flanders categories reveals high frequency in the use of direction and criticism. Very little praise or development of content is noted.[24]

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[21] For evidence that children can learn to read in the kindergarten, see Kenneth Wann. *Beginning Reading Instruction in the Kindergarten.* Washington, D. C.: Department of Elementary-Kindergarten-Nursery Education, National Education Association, 1966. The report summarizes a longitudinal study of 4,000 children in the Denver Public Schools. See also a critical analysis of this study: Darlene Weisblatt Mood. "Reading in Kindergarten? A Critique of the Denver Study." *Educational Leadership* 24 (5): 399-403; February 1967.

[22] William W. Wattenberg. *Relationship of Self-Concept to Beginning Achievement in Reading.* USOE Cooperative Research Project No. 377. Detroit, Michigan: Wayne State University, 1962.

[23] For instruments that can be adapted for use with young children in helping determine self-concept, see: Ira J. Gordon. *Studying the Child in School.* New York: John Wiley & Sons, Inc., 1966. pp. 52-88.

New curriculum designs will give more attention to the specific and precise language of the teacher and its potential impact upon the child rather than to methodology in a broad and imprecise sense. In addition, we will have more knowledge relative to the effects of a teacher's nonverbal behavior upon the child.

Use of Materials

Needless to say, 25 years hence, the market will be well-stocked with various types of educational materials. Opportunities for self-instruction through technological equipment will be numerous. Nonetheless, our first concern about too much programming will have diminished. Programs to teach some concepts and skills will have proved satisfactory; in many other instances, they will have proved unsatisfactory.

Inexpensive books which highlight a single viewpoint will be seen in increasing numbers on classroom shelves.[25] One major reason for the increased use of books, as against programmed materials, is that books provide for the development of valued skills such as creative thinking. The absence of a variety of books in the classroom prohibits children from browsing and classifying knowledge. When persons outside the classroom do the classifying, children are prevented from participating in organizing in their own ways.

Learning styles of children, however, will be more clearly identified, and some children will use computerized forms of instruction rather heavily for the learning of certain subjects and skills. Ramo says: [26]

> One basic concept then that guides today's application of computers in our man-machine partnership is that the more mundane, but high capacity,

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[24] Reported by Edmund Amidon of Temple University in an informal seminar.

[25] R. R. Bowker Company, New York, now produces *Paperbound Book Guide for Elementary Schools*. Lindalee Mesiano, editor; the current guide annotates a list of 730 reprints and originals.

[26] Simon Ramo. "The Computer as an Intellectual Tool." *Educational Screen and Audiovisual Guide* 45: 30-31; September 1966; the entire issue is devoted to technology in 1990. See also: Charles E. Silberman. "Technology Is Knocking at the Schoolhouse Door." *Fortune* 74: 120-25+; August 1966, available in reprint form.

information handling tasks are assigned to the machine, while the more contemplative, decision-making, conclusion-drawing intellectual tasks remain for the human mind.

To ascertain more fully technology's impact upon education, such projects as the Individually Prescribed Instruction Programs sponsored by Research for Better Schools, Inc., a regional educational laboratory,[27] should be followed. These programs are now in use in four schools in the Delaware, New Jersey, and Southeastern Pennsylvania region served by the laboratory.

With recent research indicating that many school failures are caused by poor reading skills, it may be found that some children develop less frustration as a result of their use of such visual tools as 8mm movie cameras and videotapes. Taping children at work and at play, for example, may stimulate a greater awareness of themselves as persons.

Educational television will continue to be widely used; however, more viewing of school-related programs will be done at home. Programs will do less dispensing of knowledge. More television time will be devoted to challenging the student by:

> Presenting a problem and letting him solve it.
>
> Letting him follow through with a scientific problem, deciding at each point what should be done next.
>
> Playing games with him.[28]

If or as television broadens its methodology, there may then arise the need to think of establishing viewing centers, learning to use auxiliary personnel in follow-up activities, and developing programs of interest to the total family.

Other Considerations

The arrival at curriculum designs 25 years from now will be more difficult than it is at the present time. One reason is that man will possess an overload of concepts and materials from which he must select the most significant to be included in elementary school programs. But our task may be somewhat simpler than it is today, for we should have at our disposal tools which will enable the making of more appropriate and more meaningful kinds of designs.

In addition, we should have more promising ways of assessing and disseminating curriculum designs, thus forwarding the easier exchange of knowledge among schools engaged in like enterprises. For example, Educational Projects Information Exchange (EPIE) [29] is designed to guide school people in purchasing textbooks and materials. School systems would feed in qualitative statements about the materials so that potential purchasers would be better able to select the right materials for their needs.

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[27] These programs were first developed and tested by the Learning Research and Development Center of the University of Pittsburgh.

[28] "Whatever Became of Continental Classroom?" *Education, U.S.A.*, December 29, 1966. p. 104; the issue is devoted to an analysis of educational television.

Another helpful service, currently being organized by Phi Delta Kappa, is the School Research Information Service (SRIS),[30] designed to discover, assess, and disseminate innovative practices developed by schools and study councils. Another service to curriculum designers is being initiated by the ASCD Commission on Instructional Theory.[31] This group is developing a document, the purpose of which is to assess the formal properties of instructional theories. The project should stimulate the development of other documents to assist in evaluating the components of instructional theories and curriculum designs.

In the new schools, we will have different labels for children than are common today. Broad labels such as the "culturally deprived" and the "gifted" will be found only in the books to which we refer for historical purposes. In their stead, we will be more concerned as to whether children are good or poor decision-makers, whether they have released themselves so that spontaneity and creativity can emerge, whether they have formed worthwhile commitments and attachments.

Goodlad predicts that by the year 2000 we should be in the midst of a humanistic curriculum.[32] If the definition of "humanistic" has precision and is intimately linked to peculiarly human functions, then mankind stands to reach a new kind of greatness; if not, we may find ourselves in serious difficulty.

Assuming that the curriculum will be more humanistic in the years ahead, we must make the assumption that curriculum designs will be many and varied. For, ultimately, curriculum designs reside in the heart and mind of the curriculum worker. "Research and development are not a substitute for choice." [33] Hopefully in 1992 we will see curriculum designs full of concepts that stress and contribute to man's complexity, his desire to know, his uniqueness, and his capacity for love. Then we will have more persons who can maintain their own equilibrium and contribute more fully to the happiness of others.

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[29] Sponsored by Institute for Educational Development, New York City, Kenneth Komoski, director.

[30] Located in Bloomington, Indiana, and supported by a grant from the Kettering Foundation, the project is directed by William Gephart.

[31] Chaired by Ira J. Gordon, University of Florida, Gainesville.

[32] John I. Goodlad. "Direction and Redirection for Curriculum Change." In: *Curriculum Change: Direction and Process*. Robert R. Leeper, editor. Washington, D. C.: Association for Supervision and Curriculum Development, 1966. p. 12.

[33] Derek H. Morrell, address to the Ontario Association for Curriculum Development; mimeographed copy. p. 8.

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